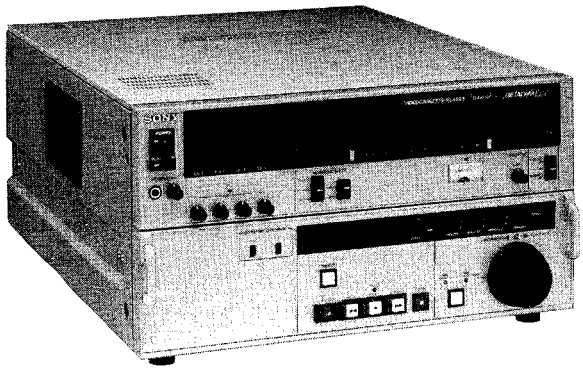
SONY

VIDEOCASSETTE PLAYER

BVW-60P



BETACAM SP™

MAINTENANCE MANUAL

Volume 2 1st Edition (Revised 9)

Serial No. 10001 and Higher

EBU N-10 LEVEL

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SECTION 17
PRINTED WIRING BOARDS

CIRCUIT CONFIGURATION

The circuit information is provided below.

System	Board	Circuit function
VIDEO	DM-56P	Y/C Demodulator
	DUS-259	Metal/Oxide LPF Switch
	DUS-269	C RF Phase EQ.
	DUS-288 *4	DO RF EQ.
	EQ-26 *4	RF EQ.
	EQ-28 *4	RF EQ.
	TBC-7P *7	Time Base Corrector
	SW-261 *3	Metal/Oxide Y/C Delay Adjust Volume
	TBC-7D *8	Time Base Corrector
	TBC-8P *7	Time Base Corrector
	NR-25 *7	Y Digital Noise Reduction
	TBC-12P *8	Time Base Corrector
	NR-32 *8	Y Digital Noise Reduction, Read Clock Generator
	TBC-9P	Time Base Corrector
	EN-48P	C Encoder
	VO-18AP	Video Output
	DUS-270	Squelch Buffer
	DEC-39A*5	Edge Detector
	DEC-46AP *6	Edge Detector
	CP-103AP	Sub Control Panel
	CP-101AP	REF. Video Input
AUDIO	AU-118P	LNG Audio Head Amplifier
	AFM-1A	AFM Audio Demodulator
	FL-61	Low-pass Filter
	BF-28A	Audio Buffer/Level Detector
	VR-42	Audio PB Volume

System	Board	Circuit function
AUDIO	CP-111	Audio Output Amplifier/Driver
	CP-113	Audio Balanced Amplifier
	HP-33	Headphones Amplifier/ Jack
	VR-62	Headphones Level Volume
	DP-74	Audio Level Meter
	DP-73	DC-AC/DC Converter
	SW-144A	Select Switch/Display
	DP-72	RF Meter LED
	VR-61	Tracking Control Volume
SERVO	SV-82A	Capstan/Drum Servo
	SV-83B	Reel Servo
	SV-84P	Capstan/Drum Servo
	RE-28	Capstan/Drum Motor Driver
	PTC-20	Cassette Detector (Tape Thickness, Reel Hub Diameter, Metal/Oxide)
	PTC-36	Cassette Detector (Tape Thickness, Reel Hub Diameter, Metal/Oxide)
	PTC-21	Reel Table Position Detector
	DR-56	Capstan/Reel Motor Driver & Drum Error Amplifier
	RE-36	Reel Motor Driver
	RM-40	Reel Motor
	DE-15	Reel Motor FG
	SE-57	Threading Motor Control
	PTC-31	Threading Motor FG
	TR-18	Tape Tension Sensor

System	Board	Circuit function
SYSTEM CONTROL	SY-61A	System Control
	SY-64AP	Time Code Reader
	KY-96C	Keyboard
	KY-107A	Keyboard
	DP-71A	Time Counter Display
	PTC-32	Search Dial
	PT-9	Power Transistor
	PD-35	Pinch/Cleaning Solenoid
	PTC-15	Thread/Unthread End Sensor
	RM-57	Remote Connector
	TC-40AP	LTC PB Amplifier
	CL-14	Cassette-up Compartment
	CL-24 *9	Cassette-up Compartment LED
	PC-32 *1	Large/Small Cassette Detector
	PC-47 *2	Large/Small Cassette Detector
	PC-33	Cassette DOWN Detector
	PC-41	Cassette IN Detector
	CCM-2	UP/DOWN Motor
	HC-11	Hours Meter
OTHERS	AC-81 *1	Relay Board of AC Inlet
	AC-96 *2	Relay Board of AC Inlet
	M1	Switching Regulator
	M2	Switching Regulator
	C1	Switching Regulator
	C2	Switching Regulator
	MB-191C	Mother Board
	MB-192	Mother Board
	EX-116	Extension Board
	EX-134	Extension Board
	EX-151	Extension Board

*1... Serial No.: up to 10170
*2... Serial No.: 10171 and higher
*3... Serial No.: up to 10270
*4... Serial No.: 10271 and higher
*5... Serial No.: up to 10622
*6... Serial No.: 10623 and higher
*7... Serial No.: up to 10712
*8... Serial No.: 10713 and higher
*9... Serial No.: 11083 and higher

DM-56P (1-622-545-31, 32, 33, 34)

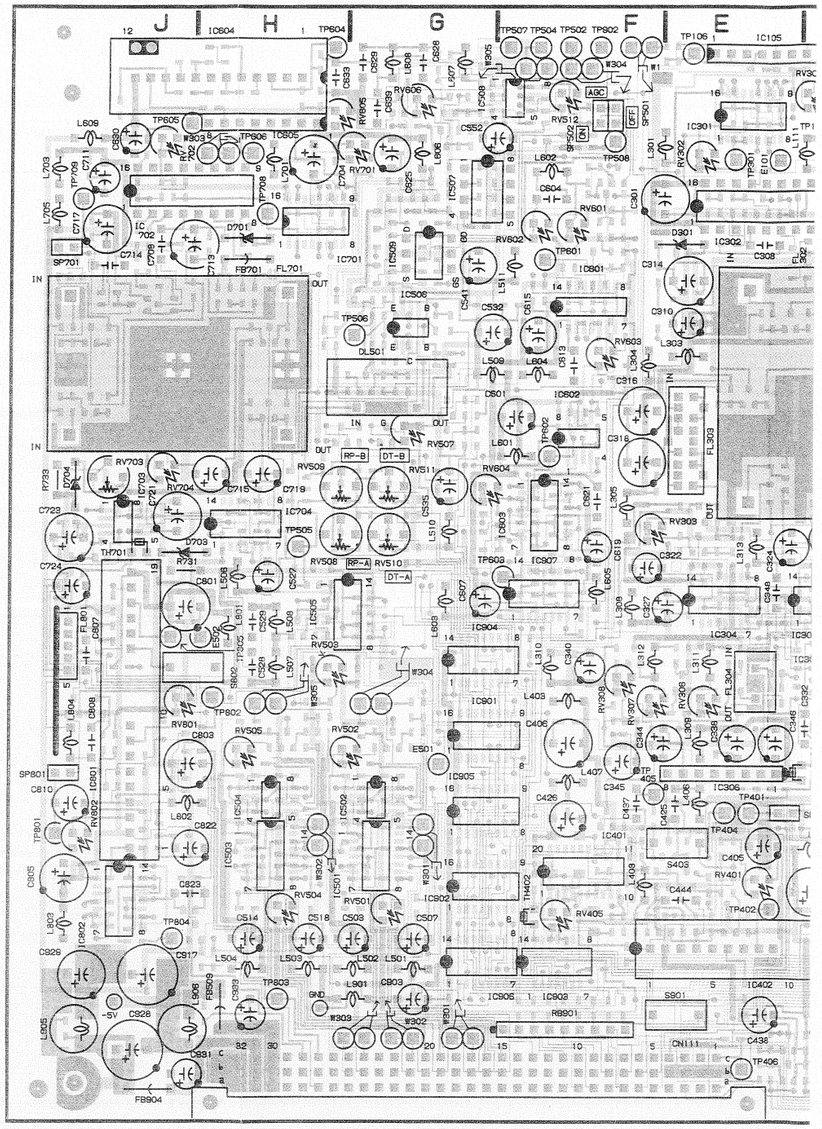
REF. NO.	TYPE	PIN NO. +12V	+9V	+5V	REG +5V	GND	−5V	−12V
IC 1	CX20158			12		5.7.10	1	
IC 2	CX20158			12		5.7.10	1	
IC 3	μPC1663G			6			3	
IC 4	μPC1663G			6			3	
IC 5	CX20158			12		5.7.10	1	
IC 102	SN16913P	8				4		
IC 103	NJM4558M	8						4
IC 104	HF UNIT			12		1.5.10		
IC 105	CX20061	1				5		
IC 201	NJM1496M							14
IC 202	TL082CPS	8					4	
IC 203	SN75107AN			14		7	13	
IC 204	TL082CPS	8					4	
IC 205	TC4053BF			16		8	7	
IC 206	SN74LS06NS			14		7		
IC 207	BX1098L		12			2.3.9 10		
IC 301	MC10H116M				1.16	8		
IC 302	MC10198L				1.16	8		
IC 303	CX20158			12		5.7.10	1	
IC 304	CX20158			12		5.7.10	1	
IC 305	μPC1663G	*						*
IC 306	CX20061	1				5		
IC 401	CXA1039M		1			6		
IC 402	SBX1540-31		19	4		1.5.6 9.15 16.18	2	
IC 403	CX20158			12		5.7.10	1	
IC 501	CX20158			12		5.7.10	1	
IC 502	μPC1663G			6			3	
IC 503	CX20158			12		5.7.10	1	
IC 504	μPC1663G			6			3	
IC 505	CX20158			12		5.7.10	1	
IC 507	SN16913P			8		4		
IC 508	NJM4558M	8						4
IC 601	NJM1496M							14
IC 602	TL082CPS	8					4	
IC 603	SN75107AN			14		7	13	
IC 604	HF UNIT			12		1.5.10		
IC 605	CX20061	1				5		
IC 701	MC10H116M				1.16	8		
IC 702	MC10198L				1.16	8		
IC 703	μPC1663G			6			7	
IC 704	CX20158			12		5.7.10		
IC 801	SBX1540-21		19	4		1.5.6 9.15 16.18	2	
IC 802	CX20158			12		5.7.10	1	
IC 901	TC74HC4049F			1		8		
IC 902	TC74HC4049F			1		8		
IC 903	TC74HC08F			14		7		
IC 904	TC74HC08F			14		7		
IC 905	TC74HC4050F			1		8		
IC 906	TC74HC08F			14		7		
IC 908	RC7809FA	*	*	*		*	*	*
IC 909	RC7805FA	*	*	*		*	*	*

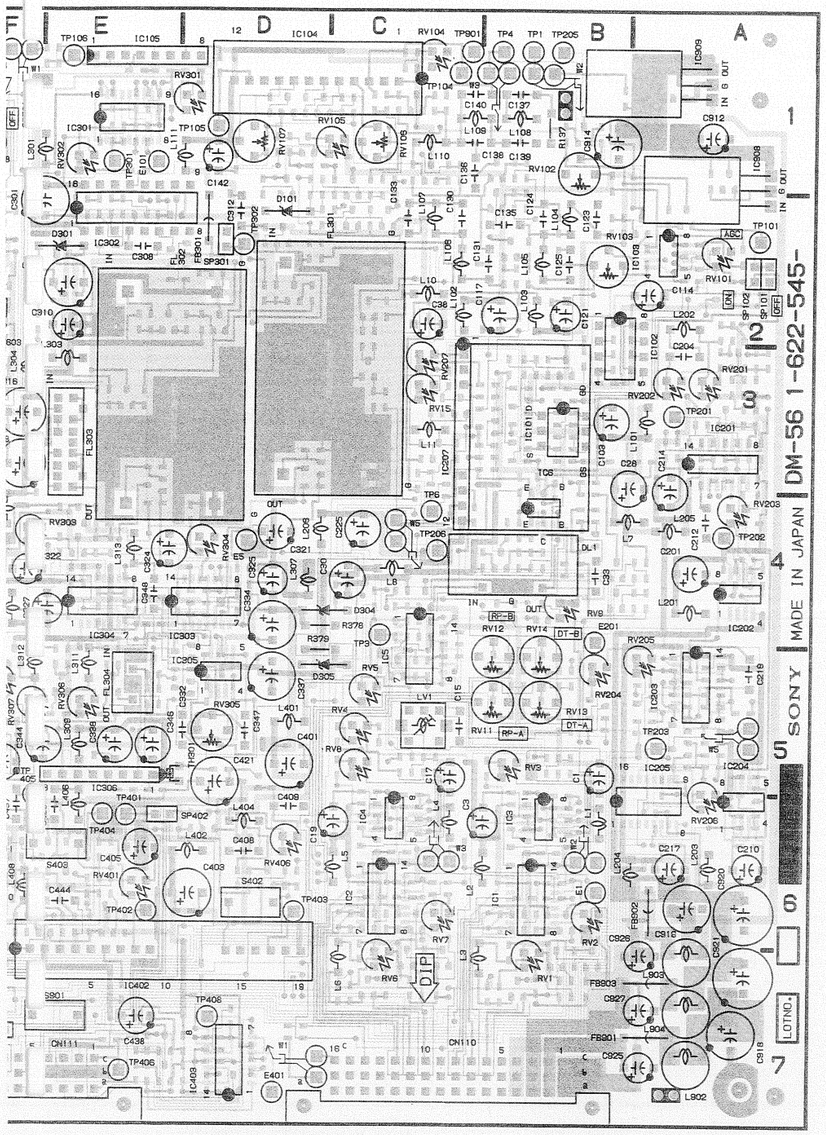
* REFER TO SCHEMATIC

DM-56P (1-622-545-31, 32, 33, 34)

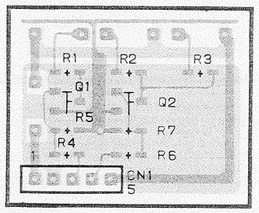
CN110	B-7	IC603	F-4	Q303	D-2	Q814	J-6	SP101	A-2
CN111	E-7	IC604	H-1	Q304	E-2	Q901	C-3	SP102	A-2
		IC605	H-1	Q305	D-2	Q902	C-2	SP301	D-2
D101	D-2	IC701	H-2	Q306	D-2			SP402	E-6
D201	A-5	IC702	J-1	Q307	D-3	RV1	B-7	SP501	F-1
D202	A-5	IC703	J-4	Q308	E-2	RV2	B-6	SP502	F-1
D301	E-2	IC704	H-4	Q309	E-3	RV3	B-5	SP701	J-2
D302	E-2	IC801	J-5	Q310	E-3	RV4	C-5	SP801	J-5
D303	D-5	IC802	J-6	Q311	E-4	RV5	C-5		
D304	D-4	IC901	G-5	Q312	E-4	RV6	C-7	TH301	D-5
D305	D-5	IC902	G-6	Q313	D-5	RV7	C-6	TH701	J-5
D601	F-4	IC903	F-7	Q314	E-5	RV8	C-5		
D701	H-2	IC904	G-5	Q315	E-5	RV9	B-4	TP1	B-1
D702	H-2	IC905	G-6	Q316	E-5	RV11	B-5	TP3	C-4
D703	J-4	IC906	G-7	Q317	F-5	RV12	B-5	TP4	B-1
D704	J-3	IC907	F-4	Q318	F-5	RV13	B-5	TP6	C-4
D801	H-6	IC908	A-1	Q401	D-6	RV14	B-5	TP101	A-2
D802	H-6	IC909	A-1	Q402	D-6	RV15	C-3	TP104	C-1
D901	A-1			Q403	D-5	RV101	A-2	TP105	D-2
D902	A-1	LV1	C-5	Q404	D-6	RV102	B-1	TP106	E-1
				Q409	E-6	RV103	B-2	TP201	A-3
DL1	B-4	Q1	B-7	Q410	E-6	RV104	C-1	TP202	A-4
DL501	G-3	Q2	B-7	Q411	E-6	RV105	C-1	TP203	A-5
		Q3	B-7	Q412	E-6	RV106	C-1	TP205	B-1
E1	B-6	Q4	B-6	Q413	F-6	RV107	D-1	TP206	C-4
E5	D-4	Q5	B-6	Q414	F-6	RV201	A-3	TP301	E-1
E101	E-1	Q6	C-5	Q415	E-7	RV202	A-3	TP302	D-2
E201	B-4	Q7	B-4	Q416	E-7	RV203	A-4	TP401	E-6
E401	D-7	Q8	B-4	Q501	G-6	RV204	B-5	TP402	E-6
E501	G-5	Q9	C-7	Q504	G-5	RV205	A-5	TP403	D-6
E502	H-4	Q10	C-7	Q505	H-6	RV206	A-6	TP404	E-6
		Q11	C-7	Q508	H-5	RV207	C-3	TP405	E-6
FL301	D-3	Q12	C-6	Q509	H-4	RV301	D-1	TP406	E-7
FL302	E-3	Q13	C-6	Q510	H-4	RV302	E-1	TP408	D-7
FL303	E-3	Q16	C-4	Q511	H-3	RV303	E-4	TP502	F-1
FL304	E-5	Q18	B-4	Q512	G-3	RV304	D-4	TP504	F-1
FL701	J-3	Q19	B-4	Q513	H-4	RV305	D-5	TP505	H-4
FL801	J-4	Q20	B-4	Q514	H-4	RV306	E-5	TP506	G-2
		Q21	B-5	Q515	G-4	RV307	E-5	TP507	F-1
IC1	B-6	Q22	B-5	Q516	G-4	RV308	F-5	TP508	F-1
IC2	C-6	Q23	B-5	Q517	G-3	RV401	E-6	TP601	F-2
IC3	B-6	Q24	B-5	Q518	G-3	RV405	F-6	TP602	F-3
IC4	C-6	Q25	B-4	Q519	G-3	RV406	D-6	TP603	F-4
IC5	C-4	Q26	B-3	Q520	G-2	RV501	G-6	TP604	H-1
IC101	B-3	Q27	C-3	Q521	G-2	RV502	G-5	TP605	J-1
IC102	B-2	Q28	C-3	Q522	G-2	RV503	H-5	TP606	H-1
IC103	A-2	Q101	B-3	Q523	G-2	RV504	H-6	TP708	H-2
IC104	D-1	Q102	B-3	Q524	G-2	RV505	H-5	TP709	J-2
IC105	E-1	Q103	B-3	Q525	G-2	RV507	G-3	TP801	J-6
IC201	A-3	Q104	A-2	Q526	F-1	RV508	H-4	TP802	H-5
IC202	A-4	Q105	A-2	Q527	H-3	RV509	H-3	TP803	H-7
IC203	A-5	Q106	A-2	Q601	F-1	RV510	G-4	TP804	J-6
IC204	A-6	Q107	B-2	Q602	F-2	RV511	G-3	TP805	J-4
IC205	A-6	Q108	C-2	Q603	F-3	RV512	F-1	TP901	C-1
IC207	C-3	Q109	C-2	Q604	G-4	RV601	F-2	TP902	F-1
IC301	E-1	Q110	D-1	Q605	F-4	RV602	F-2		
IC302	E-2	Q111	C-1	Q606	F-4	RV603	F-3		
IC303	D-4	Q112	B-1	Q607	G-1	RV604	G-3		
IC304	E-4	Q113	B-2	Q608	G-1	RV605	H-1		
IC305	D-5	Q114	B-1	Q609	G-1	RV606	G-1		
IC306	E-5	Q115	C-1	Q610	G-1	RV701	G-1		
IC401	F-6	Q116	C-1	Q701	H-2	RV702	J-1		
IC402	E-7	Q117	D-1	Q702	J-3	RV703	J-3		
IC403	D-7	Q118	D-1	Q703	J-2	RV704	J-3		
IC501	G-6	Q119	D-1	Q704	J-2	RV707	J-1		
IC502	G-6	Q201	A-2	Q705	J-3	RV801	J-5		
IC503	H-6	Q202	A-3	Q706	J-4	RV802	J-6		
IC504	H-6	Q203	A-3	Q707	J-3				
IC505	G-4	Q204	B-5	Q708	H-3	S402	D-6		
IC506	G-2	Q205	A-5	Q709	H-3	S403	E-6		
IC507	G-1	Q206	A-5	Q801	J-4	S802	H-5		
IC508	F-1	Q207	A-5	Q802	J-5	S901	E-7		
IC509	G-2	Q208	B-3	Q803	J-5				
IC601	F-2	Q301	E-2	Q804	J-5	SL701	H-2		
IC602	F-3	Q302	E-2	Q813	H-5				

DM-56P; Y/C DEMODULATOR
DUS-259; METAL/OXIDE LPF SWITCH
DUS-269; C RF PHASE EQUALIZER

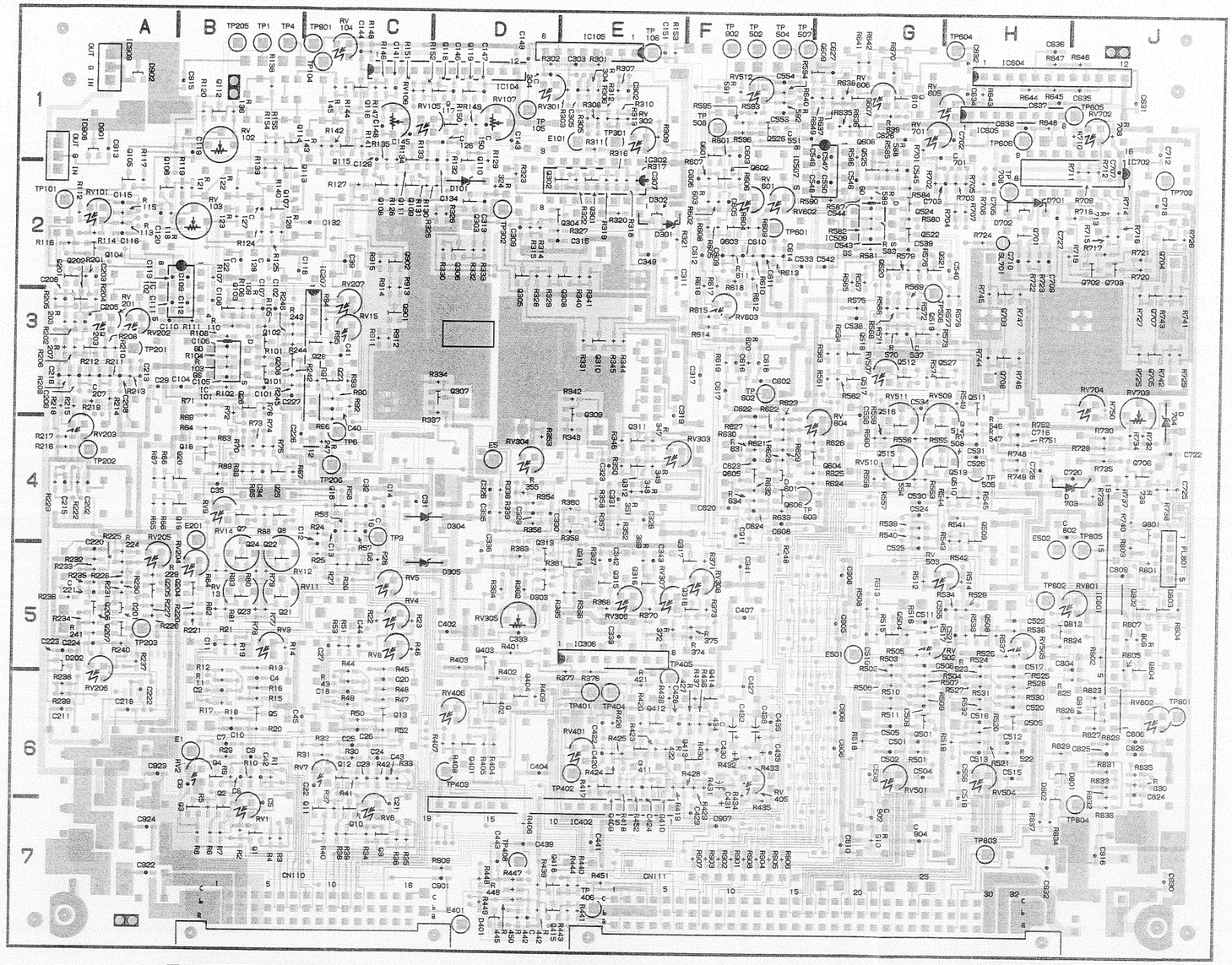


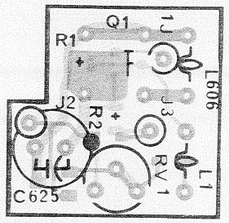


DM-56P — COMPONENT SIDE —
1-622-545-31,32,33,34
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

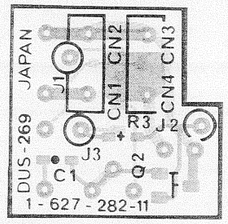


DUS-259 — SOLDERING SIDE —
1-626-836-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P





DUS-269 — COMPONENT SIDE —
1-627-282-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



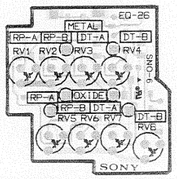
DUS-269 — SOLDERING SIDE —
1-627-282-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

DM-56P — SOLDERING SIDE —
1-622-545-31,32,33,34
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

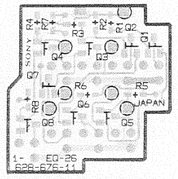
DUS-288, EQ-26, EQ-28

DUS-288;
EQ-26; RF EQUALIZER
EQ-28; RF EQUALIZER

S/N 10271 and higher



EQ-26 —COMPONENT SIDE—
1-628-676-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



EQ-26 —SOLDERING SIDE—
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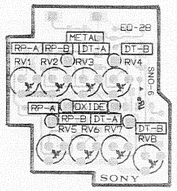
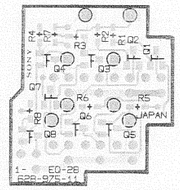
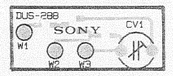
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



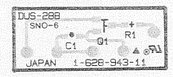
EQ-28 —COMPONENT SIDE—
1-628-975-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



EQ-28 —SOLDERING SIDE—
1-628-975-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



DUS-288 —COMPONENT SIDE—
1-628-943-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



DUS-288 —SOLDERING SIDE—
1-628-943-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

TBC-7P; TIME BASE CORRECTOR
SW-261; METAL/OXIDE Y/C DELAY ADJUST VOLUME

S/N 10001 through 10270

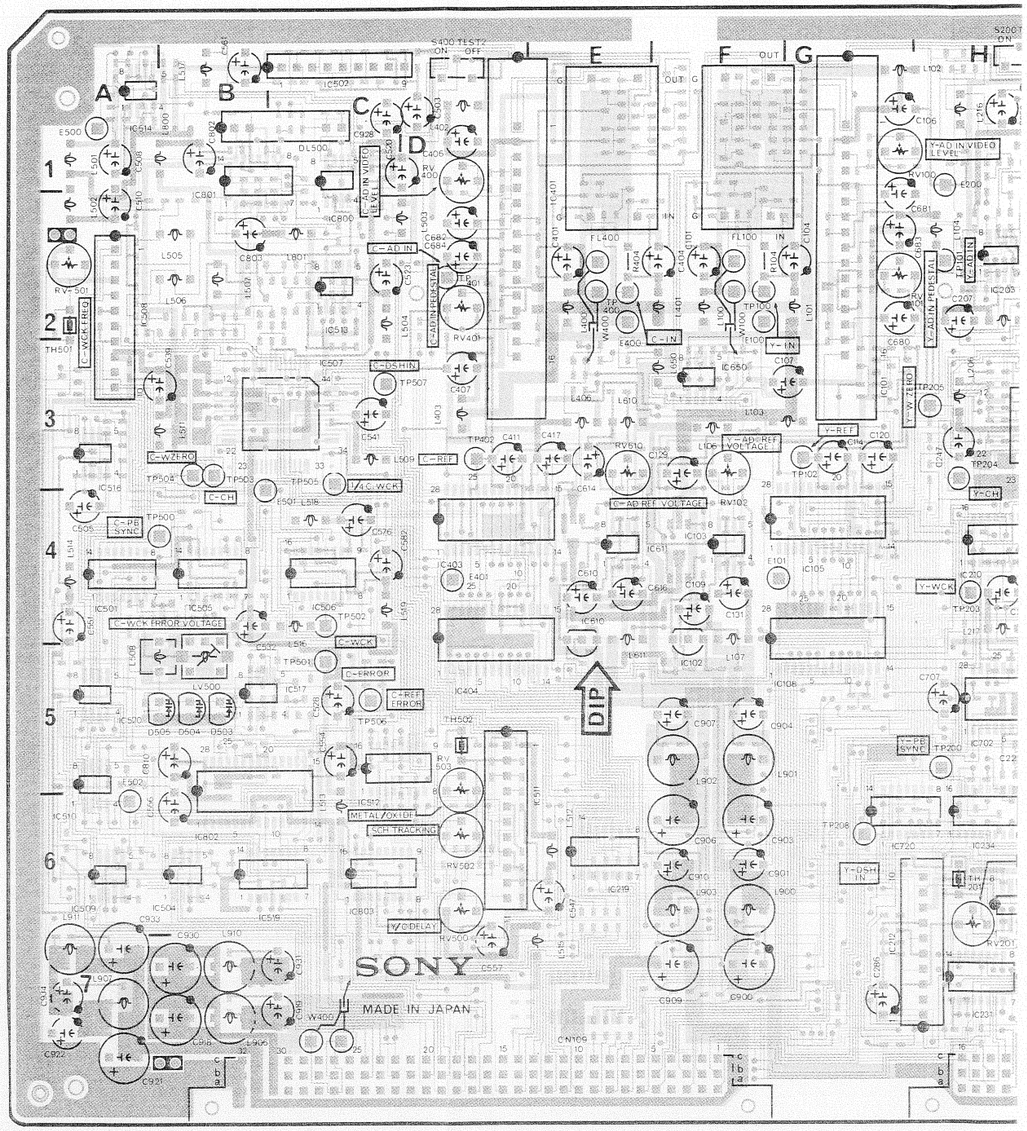
TBC-7P (1-622-548-12)

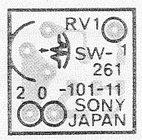
REF.NO	TYPE	PIN.NO +12V	+9V	+5V	GND	−5V	−12V
IC 101	SBX4002-01	2.11			4.13		
IC 102	TL431CLPB	*	*	*	*	*	*
IC 103	TL082CPS	8					4
IC 105	CXA1096M		13.17		13.14.15.18		
IC 108	CXD1310M		21		7		
IC 201	TA7357AP	9			5		
IC 203	MB4002PF	8			1		4
IC 205	MB4002PF	8			1		4
IC 206	SN74LS221NS			16	8		
IC 207	TL082CPS						4
IC 208	SN74LS06NS			14	7		
IC 209	MC10H116M				1.16	8	
IC 210	MC10H125M			9	16	8	
IC 211	CXD1045Q			17.39	1.6.28		
IC 212	BX-1461	8			4.7		
IC 213	TL082CPS	8					4
IC 214	TL601CPS			8		4	
IC 215	SN74LS221NS			16	8		
IC 216	BX-1460	10			8		9
IC 217	μPC319G2	11			3		
IC 218	TC74HC221F			16	8		
IC 219	TC574HC74F			14	7		
IC 220	TL082CPS	8					4
IC 221	TL601CPS	8					4
IC 222	μPC339G2	3		12			
IC 223	TC74HC32F			14	7		
IC 224	TC74HC00F			14	7		
IC 225	TL082CPS	8					4
IC 226	TL601CPS	8			1		5
IC 231	TC74HC08F			14	7		
IC 232	TL601CPS	8			1		5
IC 233	TL082COS	8					4
IC 401	BX-1464	2.11			4.13		
IC 403	CXA1096M		13.17		12.14.15.18		
IC 404	CXD1310M		21		7		
IC 501	TC74HC00F			14	7		
IC 502	TA7357AP	9			5		
IC 504	TL082CPS	8					4
IC 505	SN74LS06NS			14	7		
IC 506	MC10H125M			9	16		
IC 507	CXD1045Q			17.39	1.6.28		
IC 508	BX-1461	8			4.6		
IC 509	TL082CPS	8					4
IC 510	TL601CPS	8			1		5
IC 511	BX-1460	10			8		9
IC 512	SN74LS221NS			16	8		
IC 513	MB4002PF	8			1		4
IC 514	TL601CPS	8			1		5
IC 516	TL082CPS	8					4
IC 517	TL082CPS	8					4
IC 519	TC74HC86F			14	7		
IC 520	TL601CPS	8			1		5
IC 610	TL431CLPB	*	*	*	*	*	*
IC 611	TL082CPS	8					4
IC 650	MB4002PF	8			1		4
IC 700	TL601CPS	8			1		5
IC 701	CX20158			14	5.7.10	1	
IC 702	CX7930A			28	14		
IC 720	TC74HC08F			14	7		
IC 800	TL601CPS	8			1		5
IC 801	CX20158			14	5.7.10	1	
IC 802	CX7930A			28	14		
IC 803	SN74LS221NS			16	8		

* REFER TO SCHEMATIC

TBC-7P (1-622-548-12)

CN108	J-7	IC222	K-6	Q403	F-1	TP502	C-4
CN109	D-7	IC223	J-7	Q404	F-1	TP503	B-3
		IC224	J-7	Q500	B-1	TP504	B-3
D100	F-1	IC225	K-6	Q501	B-2	TP505	C-3
D200	H-2	IC226	K-5	Q503	B-4	TP506	C-5
D202	J-5	IC228	L-5	Q504	A-3	TP507	C-3
D203	J-5	IC231	H-7	Q505	A-1		
D204	K-5	IC232	L-6	Q512	B-2		
D205	L-4	IC233	L-6	Q513	B-2		
D206	L-4	IC234	H-6	Q514	B-2		
D207	L-4	IC401	D-2	Q515	B-2		
D208	J-6	IC403	D-4	Q516	A-3		
D209	J-1	IC404	D-4	Q610	E-4		
D210	K-2	IC501	A-4	Q611	E-4		
D211	K-5	IC502	C-1	Q680	G-3		
D212	K-4	IC504	B-6	Q681	E-3		
D213	K-5	IC505	B-4	Q800	B-2		
D400	F-1	IC506	C-4	Q801	D-2		
D503	B-5	IC507	C-3	Q802	B-2		
D504	B-5	IC508	A-2				
D505	B-5	IC509	A-6	RV100	G-1		
D506	A-5	IC510	A-5	RV101	G-2		
D507	B-5	IC511	D-6	RV102	F-3		
D508	B-2	IC512	C-5	RV200	L-3		
D650	F-3	IC513	C-2	RV201	H-6		
D680	G-3	IC514	A-1	RV202	K-5		
D700	K-5	IC516	A-3	RV203	L-5		
D701	K-6	IC517	B-5	RV400	D-1		
D702	K-6	IC519	C-6	RV401	D-2		
D703	K-6	IC520	A-5	RV500	D-6		
D704	L-5	IG610	B-4	RV501	A-2		
D705	L-6	IC611	B-4	RV502	D-6		
D706	L-6	IC650	F-3	RV503	D-5		
D707	H-2	IC700	L-1	RV610	E-3		
		IC701	L-2				
DL500	C-1	IC702	H-5	S100	J-1		
		IC720	G-6	S101	J-1		
E100	F-2	IC800	C-1	S200	H-1		
E101	F-4	IC801	B-1	S400	D-1		
E200	H-1	IC802	B-5				
E201	L-3	IC803	C-6	SL200	J-3		
E202	K-5			SL201	J-3		
E400	B-2	LV200	J-4	SL202	H-3		
E401	D-4	LV201	L-4	SL203	H-3		
E500	A-1	LV500	B-5	SL204	H-3		
E501	C-4			SL205	H-5		
E502	A-6	Q100	F-2	SL505	B-3		
		Q101	F-4	SL506	B-3		
FL100	F-1	Q102	F-4	SL507	B-3		
FL400	E-1	Q103	G-1	SL508	B-3		
		Q104	F-1	SL509	B-3		
IC101	G-2	Q105	F-1	SL511	B-5		
IC102	F-4	Q106	F-1				
IC103	F-4	Q201	J-4	TH201	H-6		
IC105	G-4	Q203	J-6	TH202	L-3		
IC108	G-4	Q204	H-1	TH501	A-2		
IC201	J-1	Q205	H-1	TH502	D-5		
IC203	H-2	Q206	H-1				
IC205	J-2	Q207	H-2	TP100	F-2		
IC206	J-6	Q208	J-2	TP101	H-2		
IC207	J-5	Q209	J-1	TP102	G-3		
IC208	K-4	Q210	J-2	TP200	H-5		
IC209	J-4	Q211	K-2	TP201	J-5		
IC210	H-4	Q212	K-2	TP202	J-6		
IC211	J-3	Q213	K-2	TP203	H-4		
IC212	H-6	Q214	K-2	TP204	H-3		
IC213	J-6	Q215	H-7	TP205	H-3		
IC214	K-6	Q220	L-1	TP206	J-3		
IC215	J-3	Q221	L-1	TP207	K-5		
IC216	K-2	Q222	L-4	TP208	G-6		
IC217	J-2	Q223	K-4	TP400	E-2		
IC218	K-2	Q244	L-6	TP401	D-2		
IC219	E-6	Q400	E-2	TP402	D-3		
IC220	H-6	Q401	E-1	TP500	B-4		
IC221	K-6	Q402	E-1	TP501	C-5		

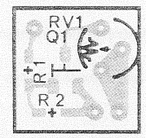




SW-261 — COMPONENT SIDE —

1-624-101-11

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



SW-261 — SOLDERING SIDE —

1-624-101-11

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

TBC-7D; TIME BASE CORRECTOR

S/N 10713 and higher

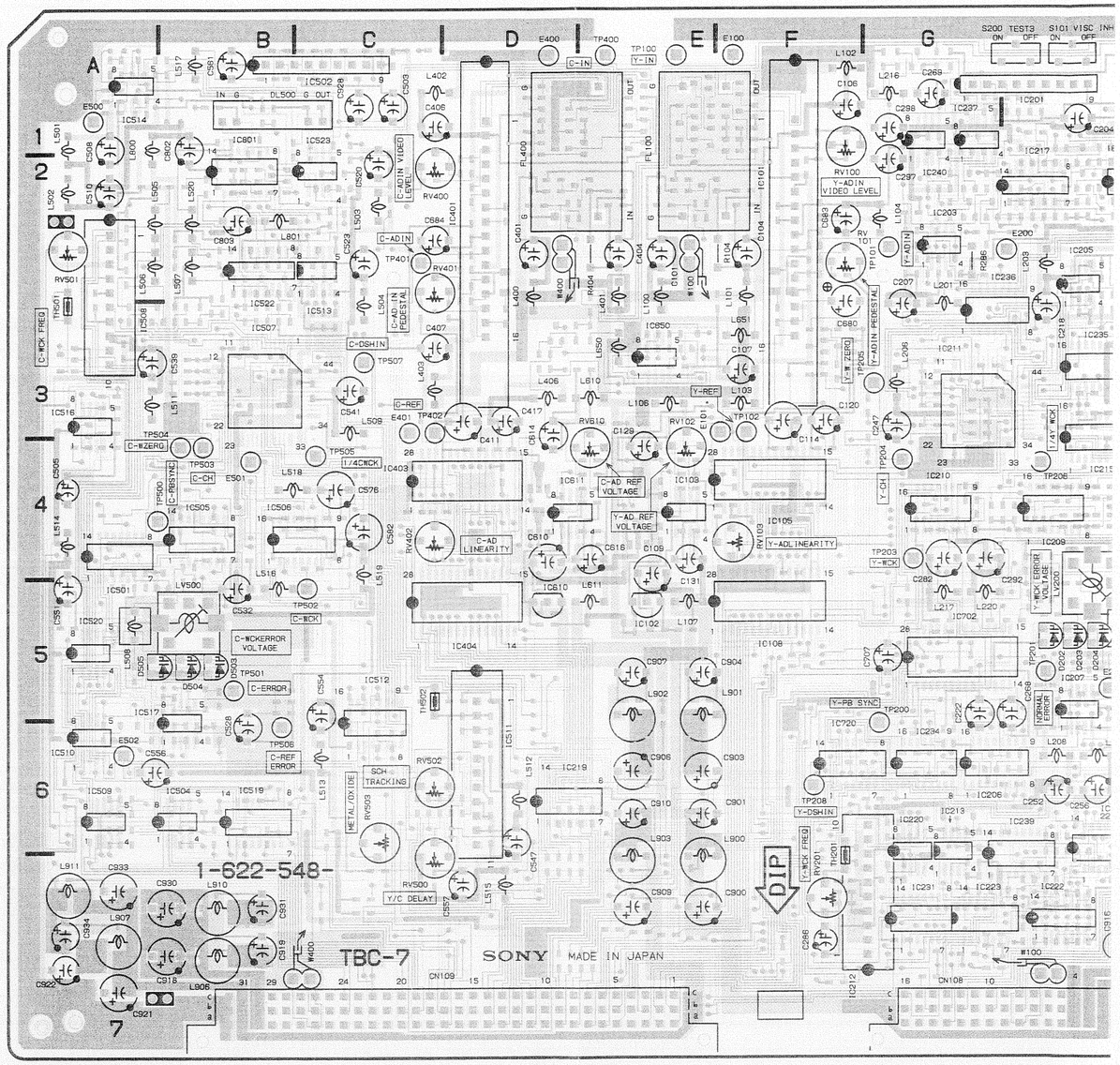
TBC-7D (1-622-548-14,15)

REF.NO.	TYPE	PIN.NO					
		+12V	+9V	+5V	GND	−5V	−12V
IC 101	SBX4002-01	2.11			4.13		5.14
IC 102	TL431CLPB	*	*	*	*	*	*
IC 103	TL082CPS	8					4
IC 105	CXA1096M			3.25.26	13.14.15.18	13.17	
IC 108	CXD1310AM			21	7		
IC 201	TA7357AP	*			5		
IC 203	MB4002PF	8			1		4
IC 205	MB4002PF	8			1		4
IC 206	SN74LS221NS			16	8		
IC 207	TL082CPS	8					4
IC 208	SN74LS06NS			*	7		
IC 209	MC10H116M				1.16	8	
IC 210	MC10H125M			9	16	8	
IC 211	CXD1045AQ			17.39	1.6.28		
IC 212	BX-1461	8			4.7		
IC 213	TL082CPS	8					4
IC 214	TL601CPS	8					5
IC 215	SN74LS221NS			16	8		
IC 216	BX-1460	10			8		9
IC 217	μPC319G2	11			3.8		6
IC 218	TC74HC221F			16	8		
IC 219	TCS74HC74F			14	7		
IC 220	TL082CPS	8					4
IC 221	TL601CPS	8			1		5
IC 222	μPC339G2	3			12		
IC 223	TC74HC32F			14	7		
IC 224	TC74HC00F			14	7		
IC 225	TL082CPS	8					4
IC 226	TL601CPS	8			1		5
IC 231	TC74HC08F			14	7		
IC 232	TL601CPS	8			1		5
IC 235	TC74HC157F			16	8		
IC 236	TC74HC157F			16	8		
IC 237	TL082CPS	8		16	8		4
IC 238	SN74LS123			16			
IC 239	TC74HC32F			10.12	9.13		
IC 241	μPC393G			5	4		8
IC 401	SBX-4002-01	2.11			4.13		5.14
IC 403	CXA1096M			13.17	12.14.15.18		
IC 404	CXD1310AM		21		7		
IC 501	TC74HC00F			14	7		
IC 502	TA7357AP	*			5		
IC 504	TL082CPS	8					4
IC 505	SN74LS06NS			14	7		
IC 506	MC10H125M			9	16		
IC 507	CXD1045Q			17.39	1.6.28		
IC 508	BX-1461	8			4.6		
IC 509	TL082CPS	8					4
IC 510	TL601CPS	8			1		5
IC 511	BX-1460	10			8		9
IC 512	SN74LS221NS			16	8		
IC 513	MB4002PF	8			1		4
IC 514	TL601CPS	8			1		5
IC 516	TL082CPS	8					4
IC 517	TL082CPS	8					4
IC 519	TC74HC86F			14	7		
IC 520	TL601CPS	8			1		5
IC 610	TL431CLPB	*	*	*	*	*	*
IC 611	TL082CPS	8					4
IC 650	MB4002PF	8			1		4
IC 700	TL601CPS	8			1		5
IC 701	CX20158			12	5.7.10	1	
IC 702	CX7930A			28	14		
IC 720	TC74HC08F			14	7		
IC 801	CX20158			14	5.7.10	1	

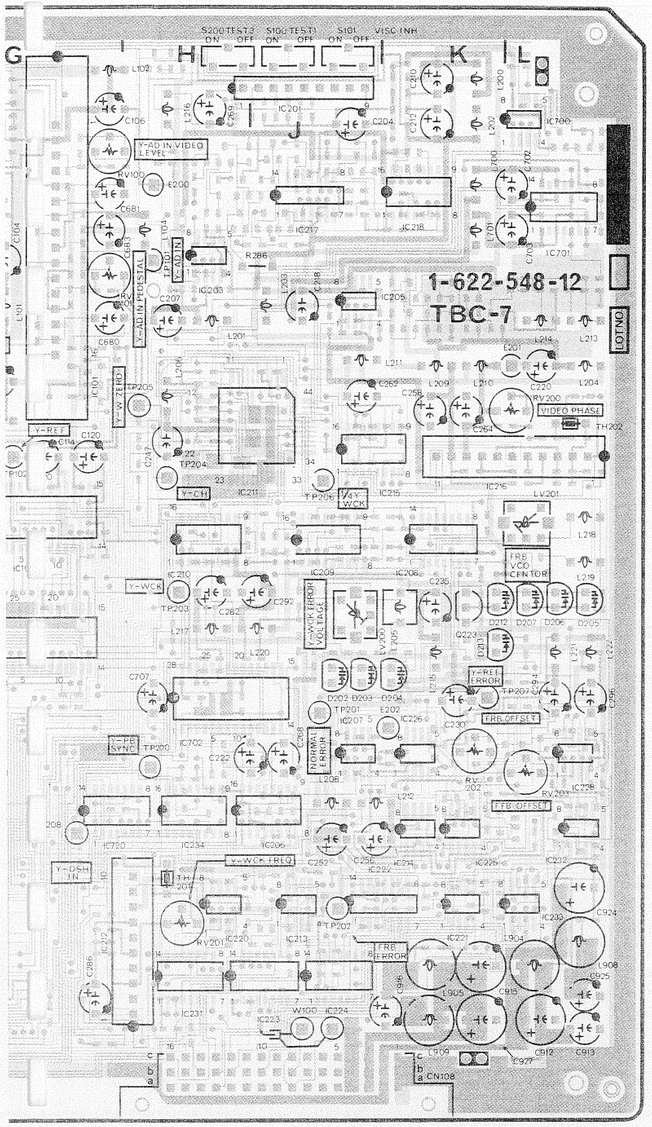
* REFER TO SCHEMATIC

TBC-7D (1-622-548-14,15)

CN108	H-7	IC225	J-6	Q229	H-2
CN109	D-7	IC226	H-5	Q230	H-2
		IC228	J-5	Q400	E-2
D100	E-1	IC231	G-7	Q401	D-1
D200	G-2	IC232	J-6	Q402	E-1
D202	H-5	IC234	G-6	Q403	E-1
D203	H-5	IC235	H-3	Q404	E-1
D204	H-5	IC236	G-3	Q500	B-2
D205	J-4	IC237	G-1	Q501	B-2
D206	J-4	IC238	J-2	Q503	B-4
D207	J-4	IC239	H-6	Q504	A-3
D208	G-6	IC240	G-1	Q505	A-1
D209	H-2	IC241	J-6	Q512	B-2
D210	J-3	IC401	D-2	Q513	B-2
D211	J-6	IC403	D-4	Q514	B-2
D212	J-4	IC404	D-5	Q515	B-2
D213	J-5	IC501	A-4	Q516	A-3
D214	H-2	IC502	C-1	Q610	D-4
D400	E-1	IC504	B-6	Q611	D-4
D503	B-5	IC505	B-4	Q680	G-3
D504	B-5	IC506	C-4	Q681	D-3
D505	A-5	IC507	B-3	Q800	C-2
D506	A-6	IC508	A-2	Q801	C-2
D507	B-6	IC509	A-6	Q802	B-3
D508	C-2	IC510	A-6	Q803	C-1
D650	E-3	IC511	D-6		
D680	F-3	IC512	C-5	RV100	F-1
D700	J-5	IC513	C-2	RV101	F-2
D704	J-5	IC514	A-1	RV102	E-4
D705	J-6	IC516	A-3	RV103	F-4
D706	J-6	IC517	B-6	RV200	J-3
D707	G-2	IC519	B-6	RV201	F-7
		IC520	A-5	RV202	J-5
DL500	B-1	IC522	B-2	RV203	J-6
		IC523	C-2	RV400	C-2
E100	F-1	IC610	D-5	RV401	C-2
E101	F-3	IC611	D-4	RV402	C-4
E200	H-2	IC650	E-3	RV500	C-7
E201	H-5	IC700	J-1	RV501	A-2
E202	J-4	IC701	J-2	RV502	C-6
E400	D-1	IC702	G-5	RV503	C-6
E401	C-3	IC720	F-6	RV610	E-4
E500	A-1	IC801	B-2		
E501	A-4			S101	H-1
E502	A-6	LV200	H-5	S200	H-1
		LV201	J-4		
FL100	E-1	LV500	B-5	TH201	F-6
FL400	D-1			TH202	J-3
		Q100	F-2	TH501	A-2
IC101	F-2	Q101	E-4	TH502	C-5
IC102	E-5	Q102	E-4		
IC103	E-4	Q103	F-1	TP100	E-1
IC105	F-4	Q104	F-1	TP101	G-2
IC108	F-5	Q105	E-1	TP102	F-3
IC201	H-1	Q106	E-1	TP200	G-5
IC203	G-2	Q201	H-5	TP201	H-5
IC205	H-2	Q203	G-6	TP202	J-7
IC206	G-6	Q204	G-1	TP203	G-4
IC207	H-5	Q205	G-1	TP204	G-4
IC208	J-4	Q206	G-1	TP205	G-3
IC209	H-4	Q207	G-2	TP206	H-4
IC210	G-4	Q208	G-2	TP207	J-5
IC211	G-3	Q211	J-2	TP208	F-6
IC212	G-7	Q212	J-3	TP400	E-1
IC213	G-6	Q213	J-2	TP401	C-2
IC214	J-6	Q214	H-3	TP402	C-3
IC215	H-3	Q215	G-7	TP500	A-4
IC216	J-3	Q220	J-1	TP501	B-5
IC217	H-2	Q221	J-1	TP502	C-5
IC218	H-2	Q222	J-4	TP503	B-4
IC219	D-6	Q223	J-4	TP504	B-4
IC220	G-6	Q224	H-6	TP505	C-4
IC221	J-6	Q225	H-6	TP506	B-6
IC222	H-7	Q226	J-6	TP507	C-3
IC223	G-7	Q227	H-7		
IC224	H-6	Q228	H-7		

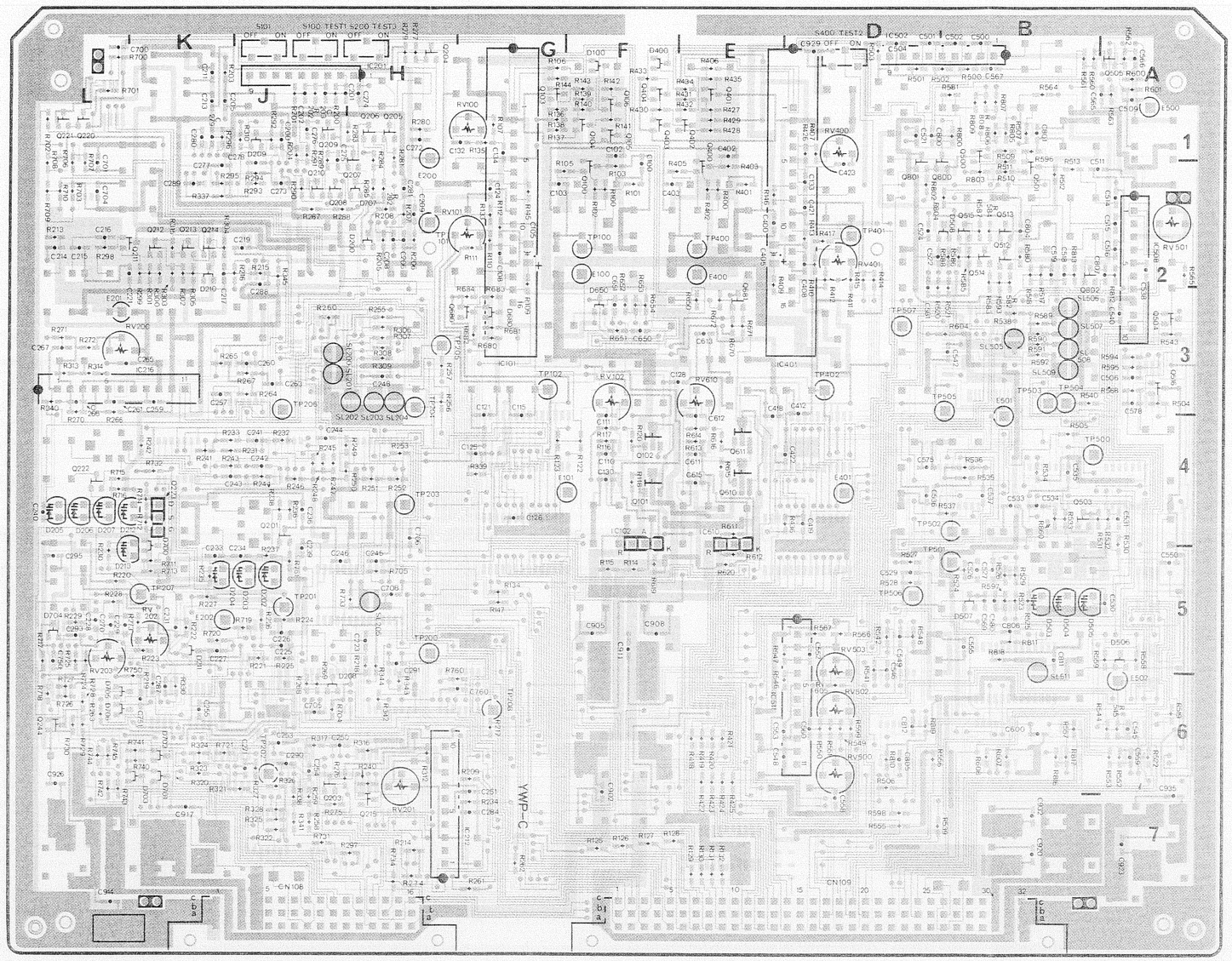


rough 10270



TBC-7P — COMPONENT SIDE —

1-622-548-12
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



TBC-7P — SOLDERING SIDE —

1-622-548-12
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

TBC-7P; TIME BASE CORRECTOR

S/N 10271 through 10712

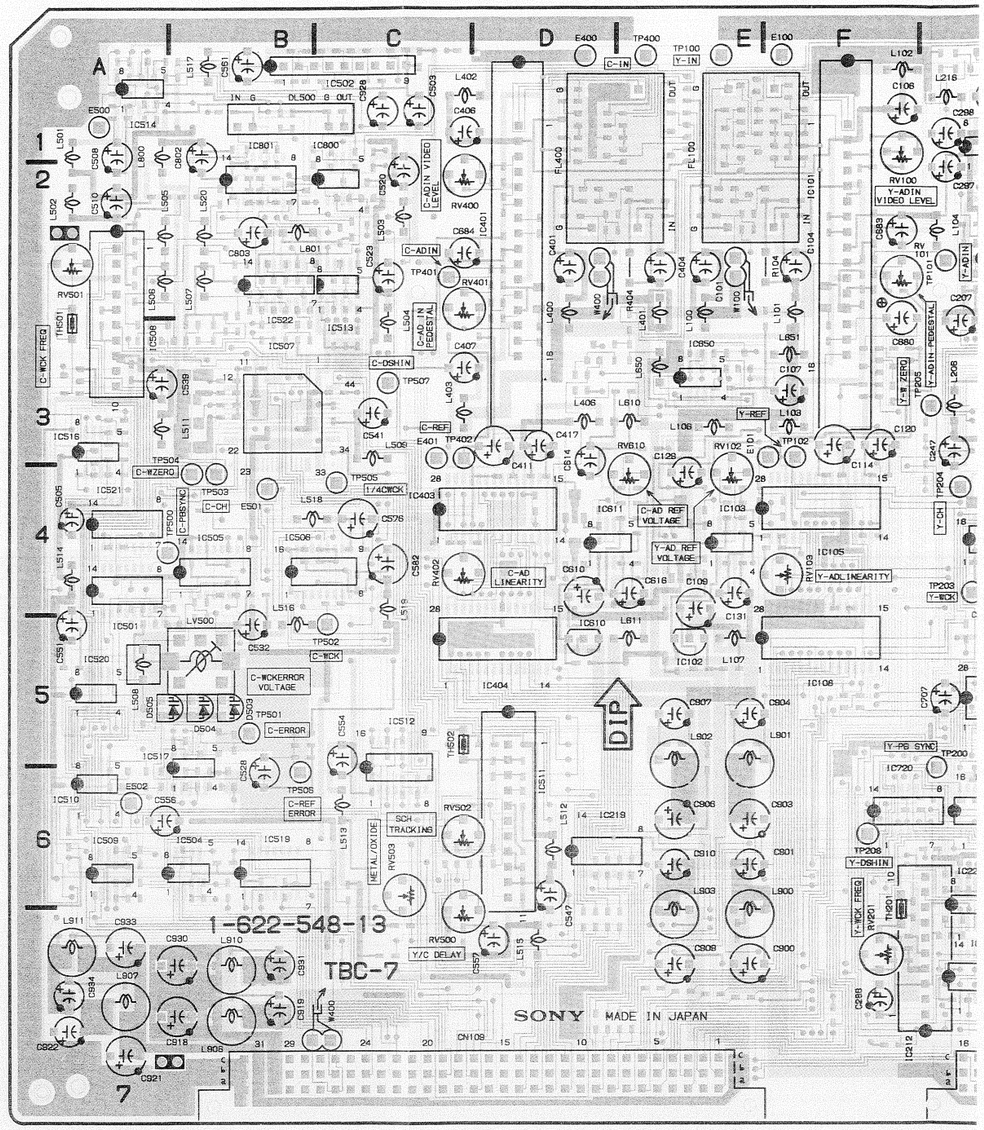
TBC-7P (1-622-548-13)

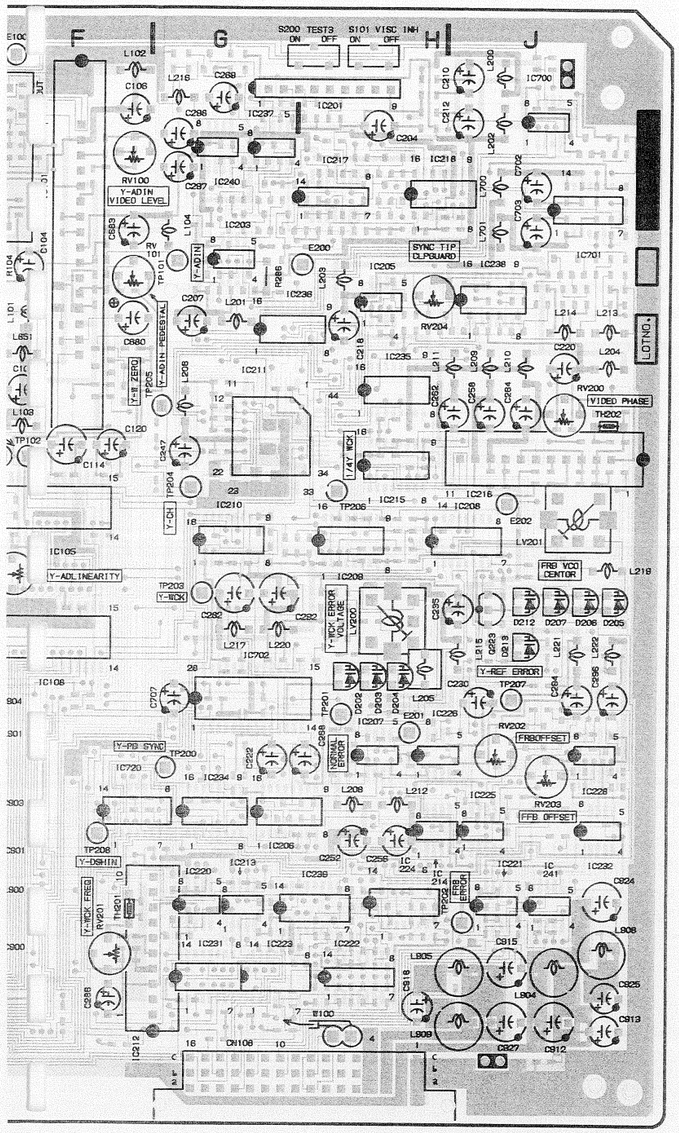
REF.NO.	TYPE	PIN.NO					
		+12V	+9V	+5V	GND	−5V	−12V
IC 101	SBX4002-01	2.11			4.13		5.14
IC 102	TL431CLPB	*	*	*	*	*	*
IC 103	TL082CPS	8					4
IC 105	CXA1096M			3.25.26	13.14.15.18	13.17	
IC 108	CXD1310AM			21	7		
IC 201	TA7357AP	*			5		
IC 203	MB4002PF	8			1		4
IC 205	MB4002PF	8			1		4
IC 206	SN74LS221NS			16	8		
IC 207	TL082CPS	8					4
IC 208	SN74LS06NS			*	7		
IC 209	MC10H116M				1.16	8	
IC 210	MC10H125M			9	16	8	
IC 211	CXD1045AQ			17.39	1.6.28		
IC 212	BX-1461	8			4.7		
IC 213	TL082CPS	8					4
IC 214	TL601CPS	8					5
IC 215	SN74LS221NS			16	8		
IC 216	BX-1460	10			8		9
IC 217	μPC319G2	11			3.8		6
IC 218	TC74HC221F			16	8		
IC 219	TCS74HC74F			14	7		
IC 220	TL082CPS	8					4
IC 221	TL601CPS	8			1		5
IC 222	μPC339G2	3			12		
IC 223	TC74HC32F			14	7		
IC 224	TC74HC00F			14	7		
IC 225	TL082CPS	8					4
IC 226	TL601CPS	8			1		5
IC 231	TC74HC08F			14	7		
IC 232	TL601CPS	8			1		5
IC 235	TC74HC157F			16	8		
IC 236	TC74HC157F			16	8		
IC 237	TL082CPS	8		16	8		4
IC 238	SN74LS123			16			
IC 239	TC74HC32F			10.12	9.13		
IC 241	μPC393G			5	4		8
IC 401	SBX-4002-01	2.11			4.13		5.14
IC 403	CXA1096M			13.17	12.14.15.18		
IC 404	CXD1310AM		21		7		
IC 501	TC74HC00F			14	7		
IC 502	TA7357AP	*			5		
IC 504	TL082CPS	8					4
IC 505	SN74LS06NS			14	7		
IC 506	MC10H125M			9	16		
IC 507	CXD1045Q			17.39	1.6.28		
IC 508	BX-1461	8			4.6		
IC 509	TL082CPS	8					4
IC 510	TL601CPS	8			1		5
IC 511	BX-1460	10			8		9
IC 512	SN74LS221NS			16	8		
IC 513	MB4002PF	8			1		4
IC 514	TL601CPS	8			1		5
IC 516	TL082CPS	8					4
IC 517	TL082CPS	8					4
IC 519	TC74HC86F			14	7		
IC 520	TL601CPS	8			1		5
IC 610	TL431CLPB	*	*	*	*	*	*
IC 611	TL082CPS	8					4
IC 650	MB4002PF	8			1		4
IC 700	TL601CPS	8			1		5
IC 701	CX20158			12	5.7.10	1	
IC 702	CX7930A			28	14		
IC 720	TC74HC08F			14	7		
IC 800	TL601CPS	8			1		5
IC 801	CX20158			14	5.7.10	1	

* REFER TO SCHEMATIC

TBC-7P (1-622-548-13)

CN108	H-7	IC224	H-6	Q227	H-7	TP207	J-5
CN109	D-7	IC225	J-6	Q228	H-7	TP208	F-6
		IC226	H-5	Q229	H-2	TP400	E-1
D100	E-1	IC228	J-6	Q230	H-2	TP401	C-2
D200	G-2	IC231	G-7	Q400	E-2	TP402	D-3
D202	H-5	IC232	J-6	Q401	D-1	TP500	B-4
D203	H-5	IC234	G-6	Q402	E-1	TP501	D-5
D204	H-5	IC235	H-3	Q403	E-1	TP502	C-4
D205	J-4	IC236	G-3	Q404	E-1	TP503	B-3
D206	J-4	IC237	G-1	Q500	B-1	TP504	B-3
D207	J-4	IC238	J-2	Q501	B-2	TP505	C-3
D208	G-6	IC239	H-6	Q503	B-4	TP506	C-5
D209	H-2	IC240	G-1	Q504	A-3	TP507	C-3
D210	J-3	IC241	J-6	Q505	A-1		
D211	J-5	IC401	D-2	Q512	B-2		
D212	J-4	IC403	D-4	Q513	B-2		
D213	J-5	IC404	D-4	Q514	B-2		
D214	H-2	IC501	A-4	Q515	B-2		
D400	E-1	IC502	C-1	Q516	A-3		
D503	B-5	IC504	B-6	Q610	D-4		
D504	B-5	IC505	B-4	Q611	D-4		
D505	B-5	IC506	C-4	Q680	G-3		
D506	A-5	IC507	C-3	Q681	D-3		
D507	B-5	IC508	A-2	Q800	C-2		
D508	C-2	IC509	A-6	Q801	C-2		
D650	E-3	IC510	A-5	Q802	B-2		
D680	F-3	IC511	D-6				
D700	J-5	IC512	C-5	RV100	F-1		
D704	J-5	IC513	C-2	RV101	G-2		
D705	J-6	IC514	A-1	RV102	E-4		
D706	J-6	IC516	A-3	RV103	F-4		
D707	G-2	IC517	B-5	RV200	J-3		
		IC519	C-6	RV201	F-7		
DL500	C-1	IC520	A-5	RV202	J-5		
		IC521	A-4	RV203	J-5		
E100	F-1	IC522	B-2	RV204	H-2		
E101	F-4	IC610	E-4	RV400	D-1		
E200	H-1	IC611	E-4	RV401	D-2		
E201	H-5	IC650	E-3	RV402	C-4		
E202	J-5	IC700	J-1	RV500	D-6		
E400	D-1	IC701	J-2	RV501	A-2		
E401	D-4	IC702	G-5	RV502	D-6		
E500	A-1	IC720	F-6	RV503	D-5		
E501	C-4	IC800	C-1	RV610	E-3		
E502	A-6	IC801	B-1				
				S101	H-1		
FL100	F-1	LV200	H-5	S200	G-1		
FL400	E-1	LV201	J-4				
		LV500	B-5	SL200	G-3		
IC101	F-2			SL201	G-3		
IC102	F-4	Q100	F-2	SL202	G-3		
IC103	F-4	Q101	E-4	SL203	G-4		
IC105	F-4	Q102	E-4	SL204	G-4		
IC108	F-5	Q103	F-1	SL205	G-5		
IC201	G-1	Q104	F-1	SL505	B-3		
IC203	G-2	Q105	E-1	SL506	B-3		
IC205	H-2	Q106	E-1	SL507	B-3		
IC206	G-6	Q201	H-5	SL508	B-3		
IC207	H-5	Q203	G-6	SL509	B-3		
IC208	J-4	Q204	G-1				
IC209	H-4	Q205	G-1	TH201	F-6		
IC210	G-4	Q206	G-1	TH202	J-7		
IC211	G-3	Q207	G-2	TH501	A-2		
IC212	G-7	Q208	G-2	TH502	D-5		
IC213	G-6	Q211	J-2				
IC214	J-6	Q212	J-2	TP100	E-1		
IC215	H-3	Q213	J-2	TP101	G-2		
IC216	J-3	Q214	H-3	TP102	F-3		
IC217	H-2	Q215	G-7	TP200	G-5		
IC218	H-2	Q220	J-1	TP201	H-5		
IC219	E-6	Q221	J-1	TP202	J-7		
IC220	G-6	Q222	J-4	TP203	G-4		
IC221	J-6	Q223	J-4	TP204	G-3		
IC222	H-7	Q224	H-6	TP205	G-3		
IC223	G-7	Q225	H-6	TP206	H-4		

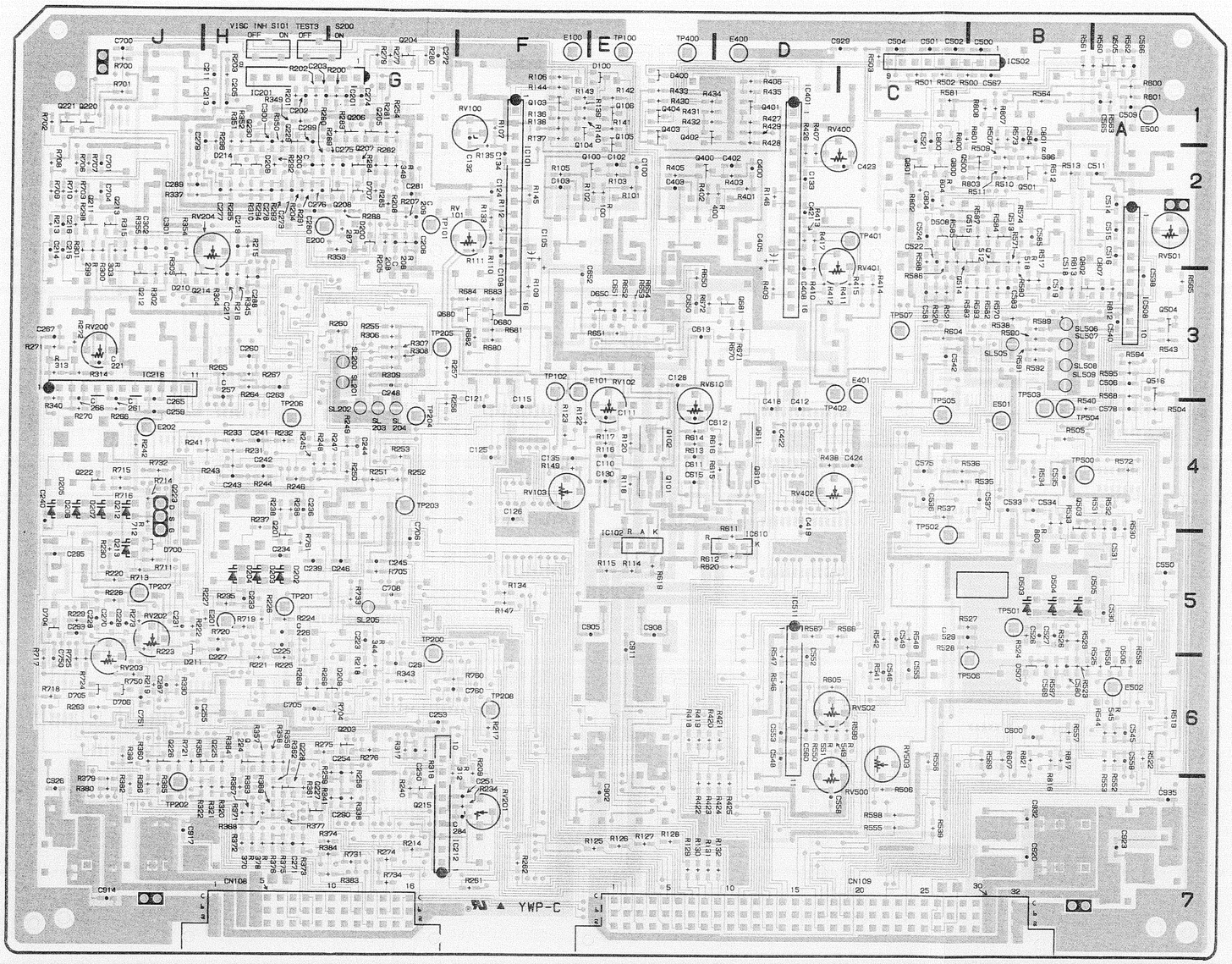




TBC-7P — COMPONENT SIDE —

1-622-548-13

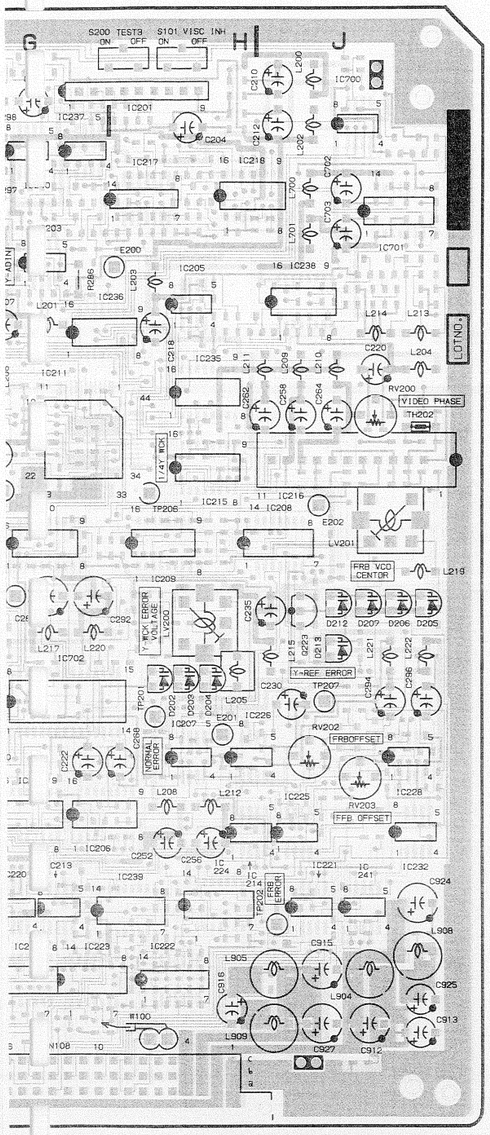
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



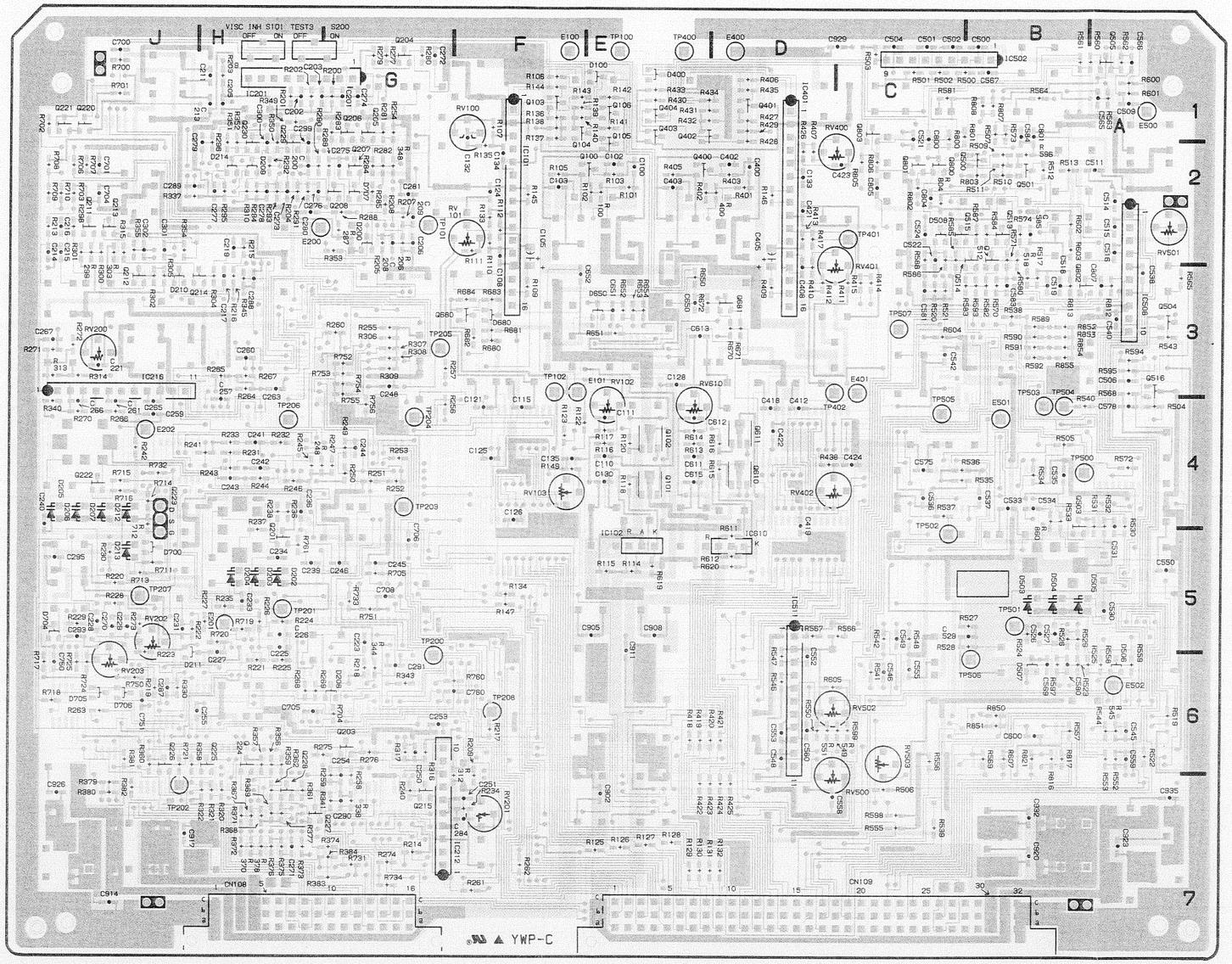
TBC-7P — SOLDERING SIDE —

1-622-548-13

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



TBC-7D —COMPONENT SIDE—
1-622-548-14,15
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P



TBC-7D —SOLDERING SIDE—
1-622-548-14,15
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

TBC-8P; TIME BASE CORRECTOR

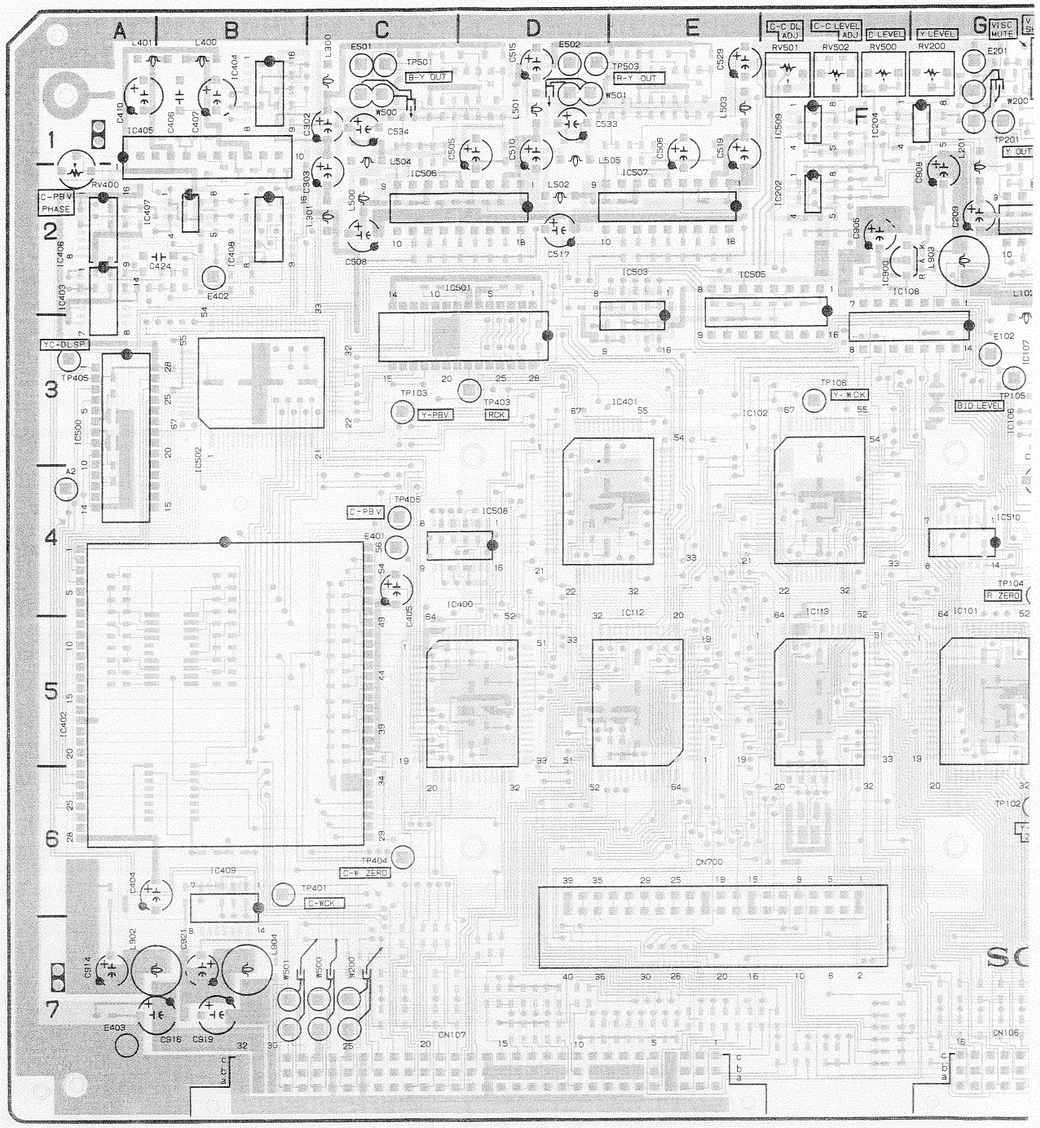
S/N 10001 through 10355

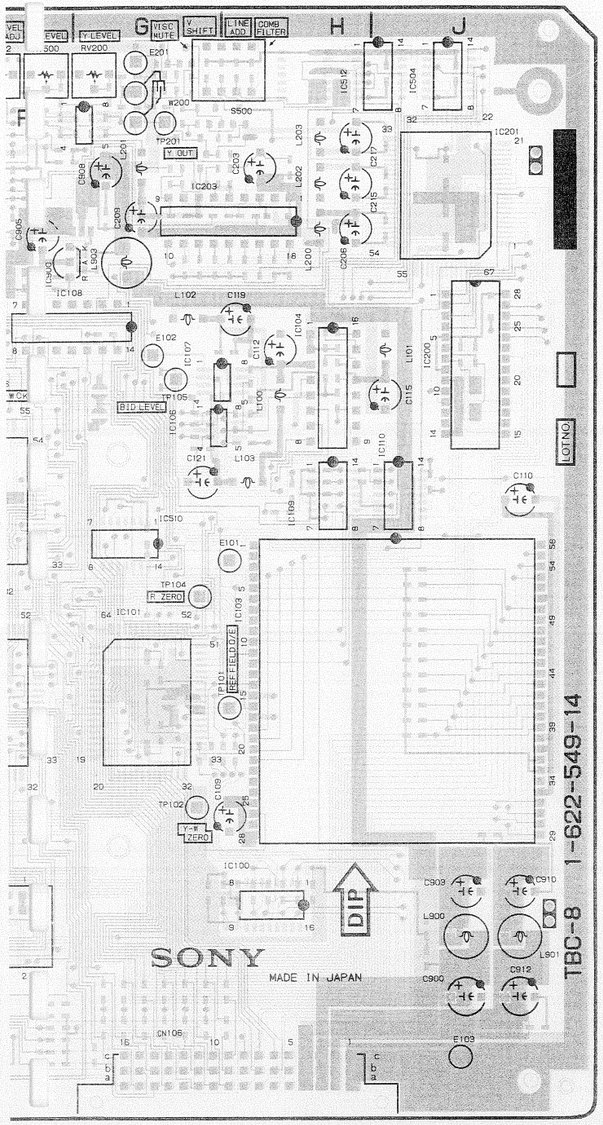
TBC-8P (1-622-549-14)

REF.NO	TYPE	PIN.NO				
		+12V	+5V	GND	−5V	−12V
IC 100	MC10H125M		9	16	8	
IC 101	CXD1022CQ		26.58	10.42		
IC 102	CXD1023AQ		27.61	1.11.44		
IC 103	SBX4001-01		28.51	17.35		
IC 104	TD62901P	13				3
IC 106	NJM4560M	8				4
IC 107	TL601CPS	8		1		5
IC 108	74F04PC		14	7		
IC 109	TC74HC04F		14	7		
IC 110	TC74HC04F		14	7		
IC 112	CXD1309BQ		26.58	10.42		
IC 113	CXD1326AQ		26.58	10.42		
IC 114	SN74LS157NS		16	8		
IC 200	CXK1202S		28	14		
IC 201	CXD1131Q		27.61	1.11.44		
IC 202	NJM4560M	8				4
IC 203	MB40778P		2.5.7.8	1.9		
IC 204	NJM4560M	8				4
IC 400	CXD1022CQ		26.58	10.42		
IC 401	CXD1023AQ		27.61	1.11.44		
IC 402	SBX4001-01		28.51	17.35		
IC 403	TC74HC86F		14	7		
IC 404	TC74HC221F		16	8		
IC 405	BX1461	8			3	
IC 406	TC4053BF		16	8	7	
IC 407	TL082CPS	8				4
IC 408	SN74LS221NS		16	8		
IC 409	TC74HC04F		14	7		
IC 500	CXK1202S		28	14		
IC 501	CXK1202S		28	14		
IC 502	CXD1131Q		27.61	1.11.44	8	
IC 503	MC10H125M		9	16	8	
IC 504	TC74HC00F		14	7		
IC 505	MC10198L			1.16	8	
IC 506	MB40778P		2.5.7.8	1.9		
IC 507	MB40778P		2.5.7.8	1.9		
IC 508	SN74LS221NS		16	8		
IC 509	NJM4560M	8				4
IC 510	TC74HC08F		14	7		
IC 512	TC74HC27F		14	7		
IC 900	TL431CLPB	*	*	*	*	*

TBC-8P (1-622-549-14)

CN106	G-7	IC500	A-3	SL201	J-3
CN107	C-7	IC501	C-3	SL202	J-3
CN700	E-7	IC502	B-3	SL300	G-3
		IC503	E-3	SL301	G-3
D201	G-1	IC504	J-1	SL302	C-5
D202	G-1	IC505	E-3	SL401	D-5
D400	B-2	IC506	C-2	SL402	D-5
D500	D-1	IC507	E-2	SL403	E-4
D501	E-1	IC508	D-4	SL404	C-6
		IC509	F-1	SL501	A-3
E101	H-4	IC510	G-4	SL502	A-3
E102	G-3	IC512	J-1	SL503	D-2
E103	J-7	IC900	F-2	SL504	D-2
E201	G-1			SL505	H-1
E401	C-4	Q201	G-2	SL506	H-1
E402	B-2	Q202	H-1		
E403	A-7	Q203	G-1	TP101	H-5
E501	C-1	Q204	G-1	TP102	G-6
E502	D-1	Q205	G-1	TP103	C-3
		Q400	A-2	TP104	G-4
IC100	H-6	Q401	B-2	TP105	G-3
IC101	G-5	Q402	B-2	TP106	F-3
IC102	F-4	Q500	C-1	TP201	G-1
IC103	J-5	Q501	D-1	TP401	B-6
IC104	H-3	Q502	D-1	TP403	D-3
IC106	G-3	Q503	D-1	TP404	C-6
IC107	G-3	Q504	E-1	TP405	A-3
IC108	F-3	Q505	E-1	TP406	C-4
IC109	H-4	Q900	G-2	TP501	C-1
IC110	J-4			TP503	D-1
IC112	E-5	RV200	G-1		
IC113	F-5	RV400	A-1		
IC114	B-6	RV500	F-1		
IC200	J-3	RV501	F-1		
IC201	J-2	RV502	F-1		
IC202	F-2				
IC203	G-2	S500	H-1		
IC204	G-1				
IC400	D-5	SL101	G-5		
IC401	D-4	SL102	G-5		
IC402	B-5	SL103	F-4		
IC403	A-2	SL104	D-5		
IC404	B-1	SL105	E-5		
IC405	B-1	SL106	F-5		
IC406	A-2	SL107	F-6		
IC407	B-2	SL108	F-6		
IC408	B-2	SL109	F-6		
IC409	B-6	SL110	F-6		

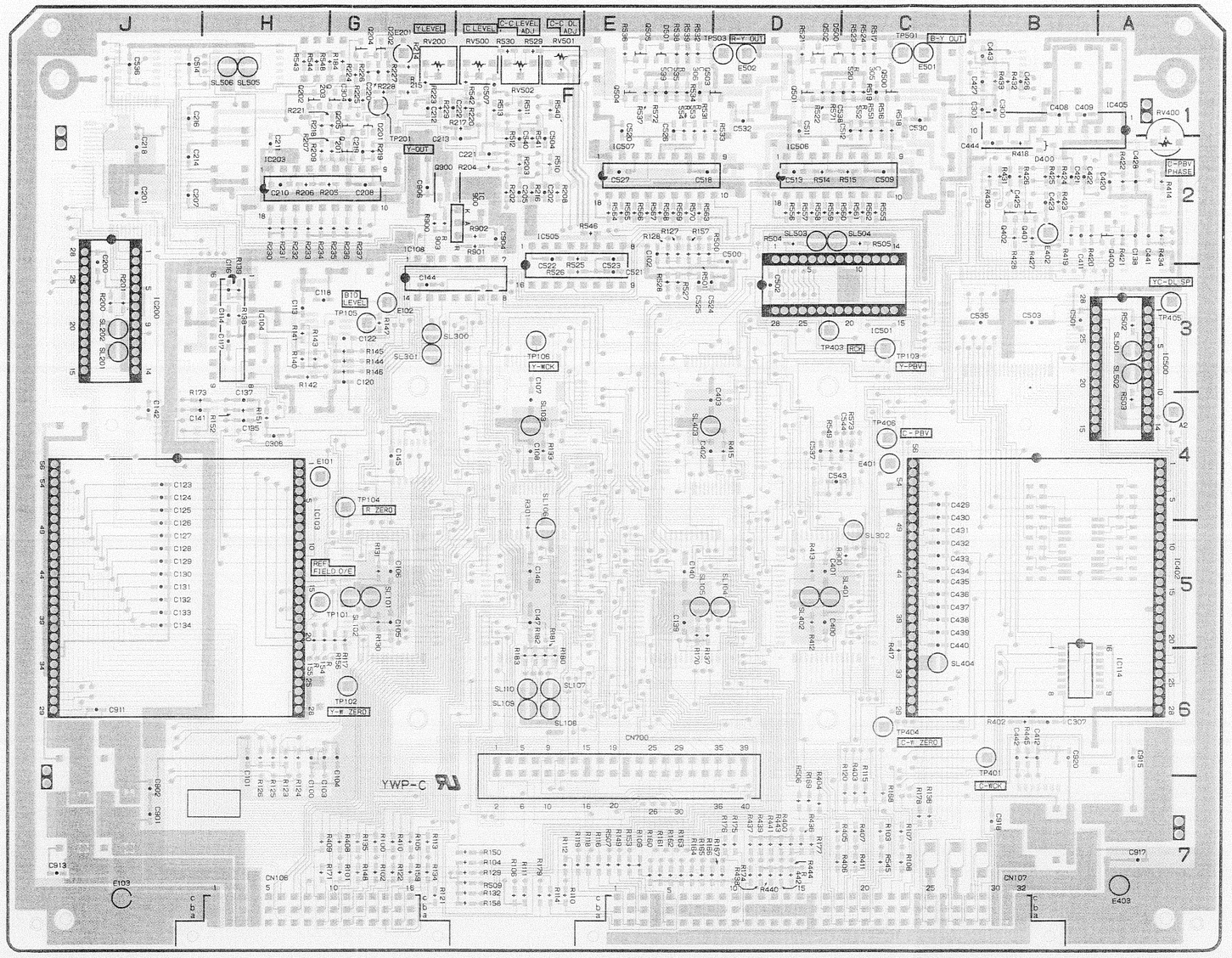




TBC-8P — COMPONENT SIDE —

1-622-549-14

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



TBC-8P — SOLDERING SIDE —

1-622-549-14

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

TBC-8P; TIME BASE CORRECTOR

S/N 10356 through 10712

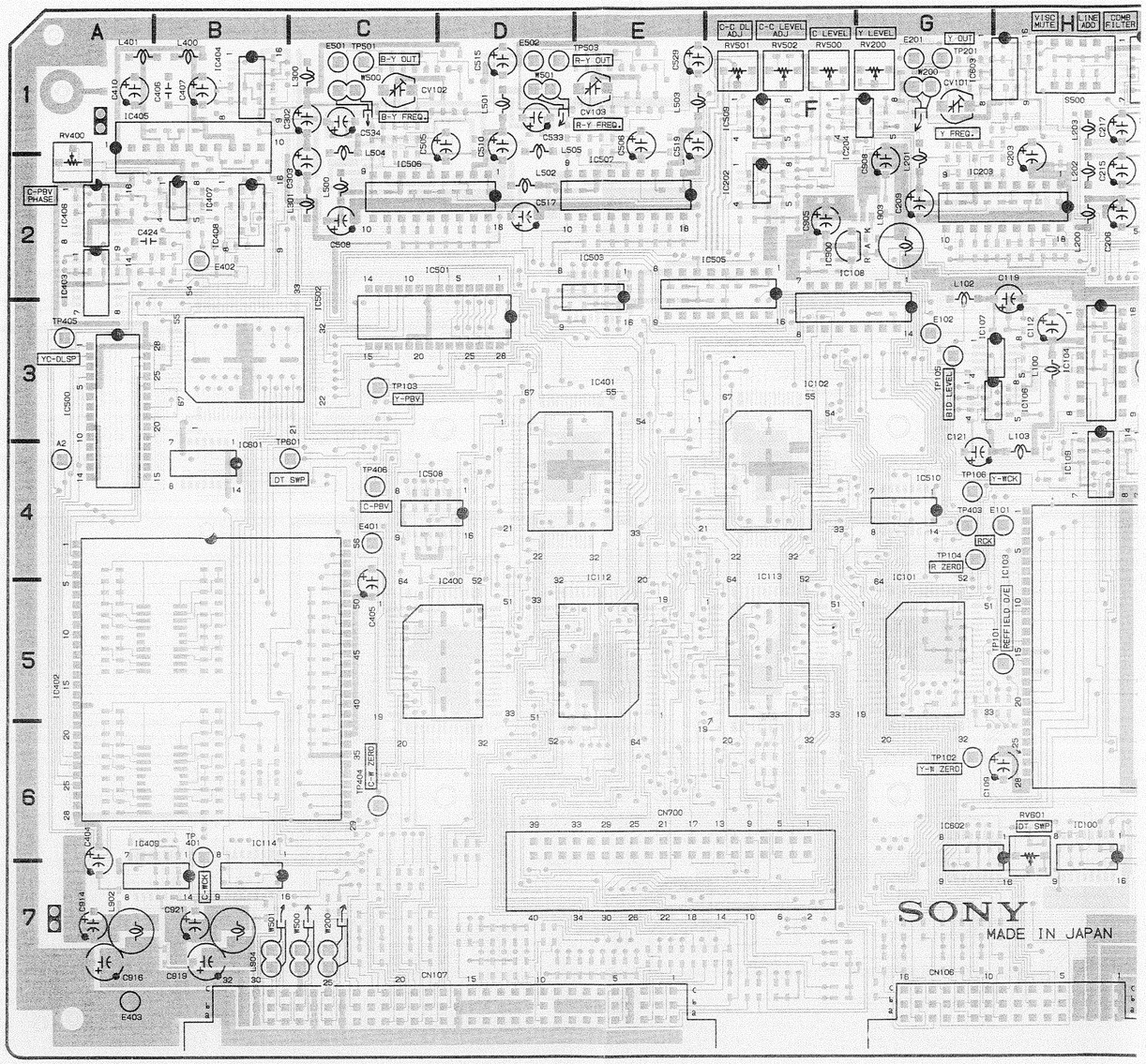
TBC-8P (1-622-549-15)

REF.NO.	TYPE	PIN.NO +12V	+5V	GND	−5V	−12V
IC 100	MC10H125M		9	16	8	
IC 101	CXD1022CQ		26.58	10.42		
IC 102	CXD1023AQ		27.61	1.11.44		
IC 103	SBX4001-01		28.51	17.35		
IC 104	TD62901P	13				3
IC 106	NJM4560M	8				4
IC 107	TL601CPS	8		1		5
IC 108	74F04PC		14	7		
IC 109	TC74HC04F		14	7		
IC 110	TC74HC04F		14	7		
IC 112	CXD1309BQ		26.58	10.42		
IC 113	CXD1326AQ		26.58	10.42		
IC 114	SN74LS157NS		16	8		
IC 200	CXK1202S		28	14		
IC 201	CXD1131Q		27.61	1.11.44		
IC 202	NJM4560M	8				4
IC 203	MB40778P		2.5.7.8	1.9		
IC 204	NJM4560M	8				4
IC 400	CXD1022CQ		26.58	10.42		
IC 401	CXD1023AQ		27.61	1.11.44		
IC 402	SBX4001-01		28.51	17.35		
IC 403	TC74HC86F		14	7		
IC 404	TC74HC221F		16	8		
IC 405	BX1461	8			3	
IC 406	TC4053BF		16	8	7	
IC 407	TL082CPS	8				4
IC 408	SN74LS221NS		16	8		
IC 409	TC74HC04F		14	7		
IC 500	CXK1202S		28	14		
IC 501	CXK1202S		28	14		
IC 502	CXD1131Q		27.61	1.11.44	8	
IC 503	MC10H125M		9	16	8	
IC 504	TC74HC00F		14	7		
IC 505	MC10198L			1.16	8	
IC 506	MB40778P		2.5.7.8	1.9		
IC 507	MB40778P		2.5.7.8	1.9		
IC 508	SN74LS221NS		16	8		
IC 509	NJM4560M	8				4
IC 510	TC74HC08F		14	7		
IC 512	TC74HC27F		14	7		
IC 900	TL431CLPB	*	*	*	*	*
IC 601	TC74HC74F		14	7		
IC 602	TC74HC221F		16	8		
IC 603	SN74LS157NS		16	8		

* REFER TO SCHEMATIC

TBC-8P (1-622-549-15)

CN106	G-7	IC406	A-2	TP103	C-3
CN107	C-7	IC407	B-2	TP104	G-4
CN700	B-7	IC408	B-2	TP105	G-3
		IC409	B-6	TP106	F-3
CV101	G-1	IC500	A-3	TP201	G-1
CV102	C-1	IC501	C-3	TP401	B-6
CV103	B-1	IC502	B-3	TP403	D-3
		IC503	E-3	TP404	C-6
D201	G-1	IC504	J-1	TP405	A-3
D202	G-1	IC505	E-3	TP406	C-4
D400	B-2	IC506	C-2	TP501	C-1
D500	D-1	IC507	E-2	TP503	D-1
D501	B-1	IC508	D-4	TP601	B-4
		IC509	F-1		
E101	H-4	IC510	G-4		
E102	G-3	IC512	J-1		
E103	J-7	IC601	B-4		
E201	G-1	IC602	G-6		
E401	C-4	IC603	H-1		
E402	B-2	IC900	F-2		
E403	A-7				
E501	C-1	Q201	G-2		
E502	D-1	Q202	H-1		
		Q203	G-1		
IC100	H-6	Q204	G-1		
IC101	G-5	Q205	G-1		
IC102	F-4	Q400	A-2		
IC103	J-5	Q401	B-2		
IC104	H-3	Q402	B-2		
IC106	G-3	Q500	C-1		
IC107	G-3	Q501	D-1		
IC108	F-3	Q502	D-1		
IC109	H-4	Q503	D-1		
IC110	J-4	Q504	E-1		
IC112	B-5	Q505	E-1		
IC113	F-5	Q900	G-2		
IC114	B-6				
IC200	J-3	RV200	G-1		
IC201	J-2	RV400	A-1		
IC202	F-2	RV500	F-1		
IC203	G-2	RV501	F-1		
IC204	G-1	RV502	F-1		
IC400	D-5	RV601	H-6		
IC401	D-4				
IC402	B-5	S500	H-1		
IC403	A-2				
IC404	B-1	TP101	H-5		
IC405	B-1	TP102	G-6		



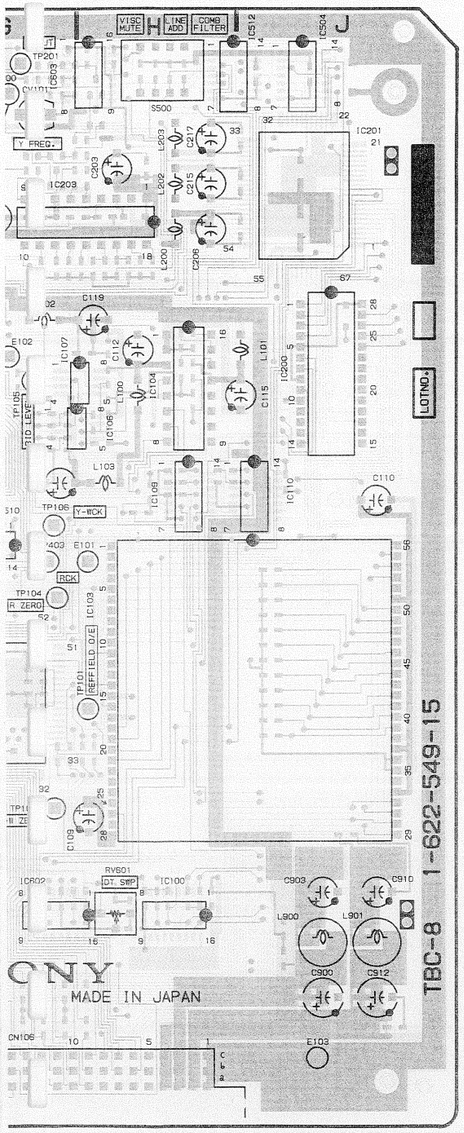
TBC-8

1-622-549-15

BVW-60P BVW-

BVW-65P BVW-

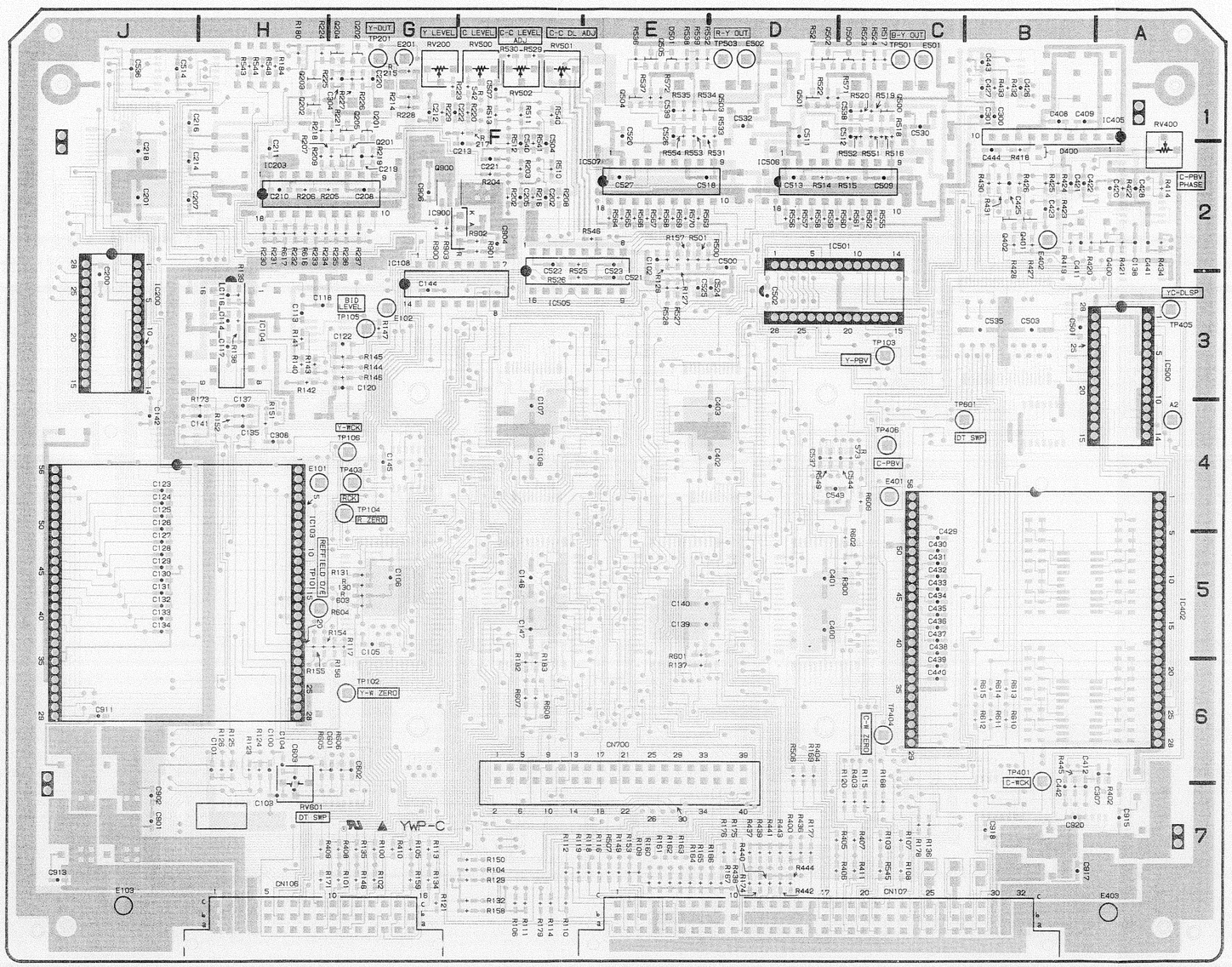
BVW-70P BVW-



TBC-8P — COMPONENT SIDE —

1-622-549-15

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



TBC-8P — SOLDERING SIDE —

1-622-549-15

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

TBC-12P; TIME BASE CORRECTOR

S/N 10713 and higher

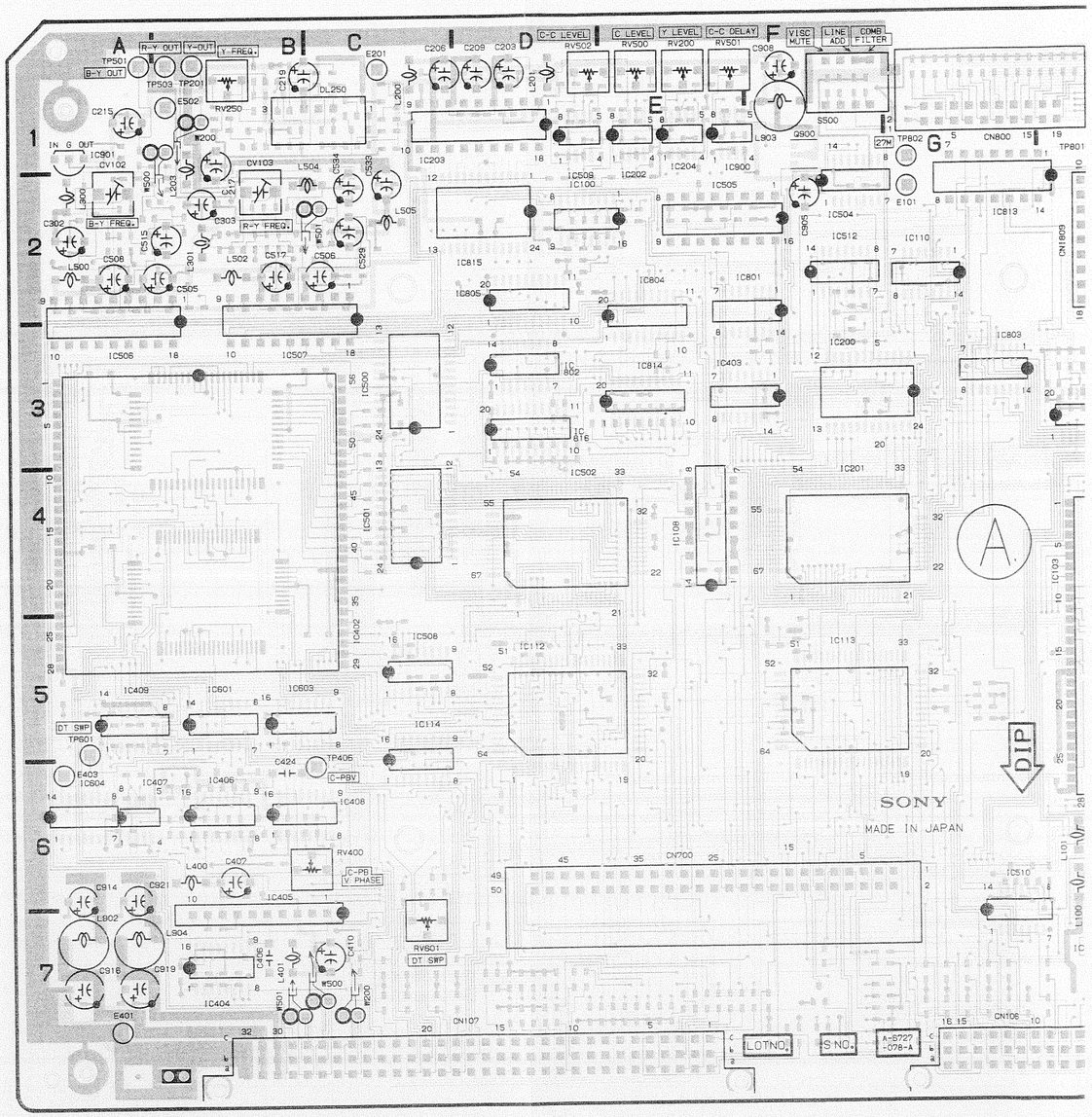
TBC-12P (1-629-462-11,12,13)

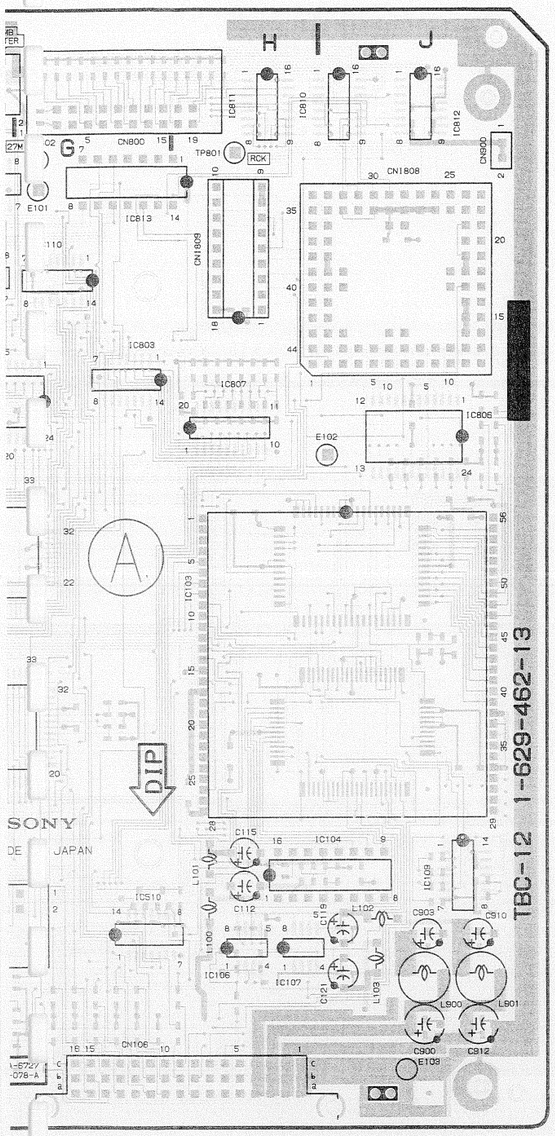
REF.NO.	TYPE	PIN.NO +12V	+5V	GND	−5V	−12V
IC 100	MC10H125M		9	16	8	
IC 101	CXD8011Q		26.58	10.42		
IC 102	CXD1023AQ		27.61	1.11.44		
IC 103	SBX4001-01		28.51	17.35		
IC 104	TD62901P	13				3
IC 106	RC4560M	8				4
IC 107	TL601CPS	8		1		5
IC 108	74F04PC		14	7		
IC 109	TC74HC04F		14	7		
IC 110	TC74HC04F		14	7		
IC 112	CXD8024Q		26.58	10.42		
IC 113	CXD1326AQ		26.58	10.42		
IC 114	SN74LS157NS		16	8		
IC 200	μPD41101G-1		18	7		
IC 201	CXD1131Q		27.61	1.11.44		
IC 202	RC4560M	8				4
IC 203	MB40778P		2.5.7.8	1.9		
IC 204	RC4560M	8				4
IC 400	CXD8011Q		26.58	10.42		
IC 401	CXD1023AQ		27.61	1.11.44		
IC 402	SBX4001-01		28.51	17.35		
IC 403	TC74HC86F		14	7		
IC 404	TC74HC221F		16	8		
IC 405	BX1461	8			3	
IC 406	TC4053BF		16	8	7	
IC 407	TL082CPS	8				4
IC 408	SN74LS221NS		16	8		
IC 409	TC74HC04F		14	7		
IC 500	μPD41101G-1		18	7		
IC 501	μPD41101G-1		18	7		
IC 502	CXD1131Q		27.61	1.11.44	8	
IC 504	TC74HC00F		14	7		
IC 505	MC10198L			1.16	8	
IC 506	MB40778P		2.5.7.8	1.9		
IC 507	MB40778P		2.5.7.8	1.9		
IC 508	SN74LS221NS		16	8		
IC 509	RC4560M	8				4
IC 510	TC74HC08F		14	7		
IC 512	SN74HC32NS		14	7		
IC 601	TC74HC74F		14	7		
IC 603	SN74LS157NS		16	8		
IC 604	SN74LS164NS		9.14	7		
IC 801	SN74HC30NS		14	7		
IC 802	SN74HC30NS		14	7		
IC 803	SN74HC30NS		14	7		
IC 804	SN74HC574NS		20	10		
IC 805	SN74HC574NS		20	10		
IC 806	μPD41101G-1		18	7		
IC 807	SN74HC540NS		20	10		
IC 808	CXB1001G		81.82.85.86	83.84.87.88		
IC 809	MB7122H		18	9		
IC 810	MC10H124M		9	16	8	
IC 811	MC10H124M		9	16	8	
IC 812	MC10H124M		9	16	8	
IC 813	74F04PC		14	1		
IC 814	SN74HC574NS		20	10		
IC 815	μPD41101G-1		18	7		
IC 816	SN74HC574NS		20	10		
IC 900	TL431CLPC	*	*	*	*	*
IC 901	NJM78L09A	*	*	*	*	*

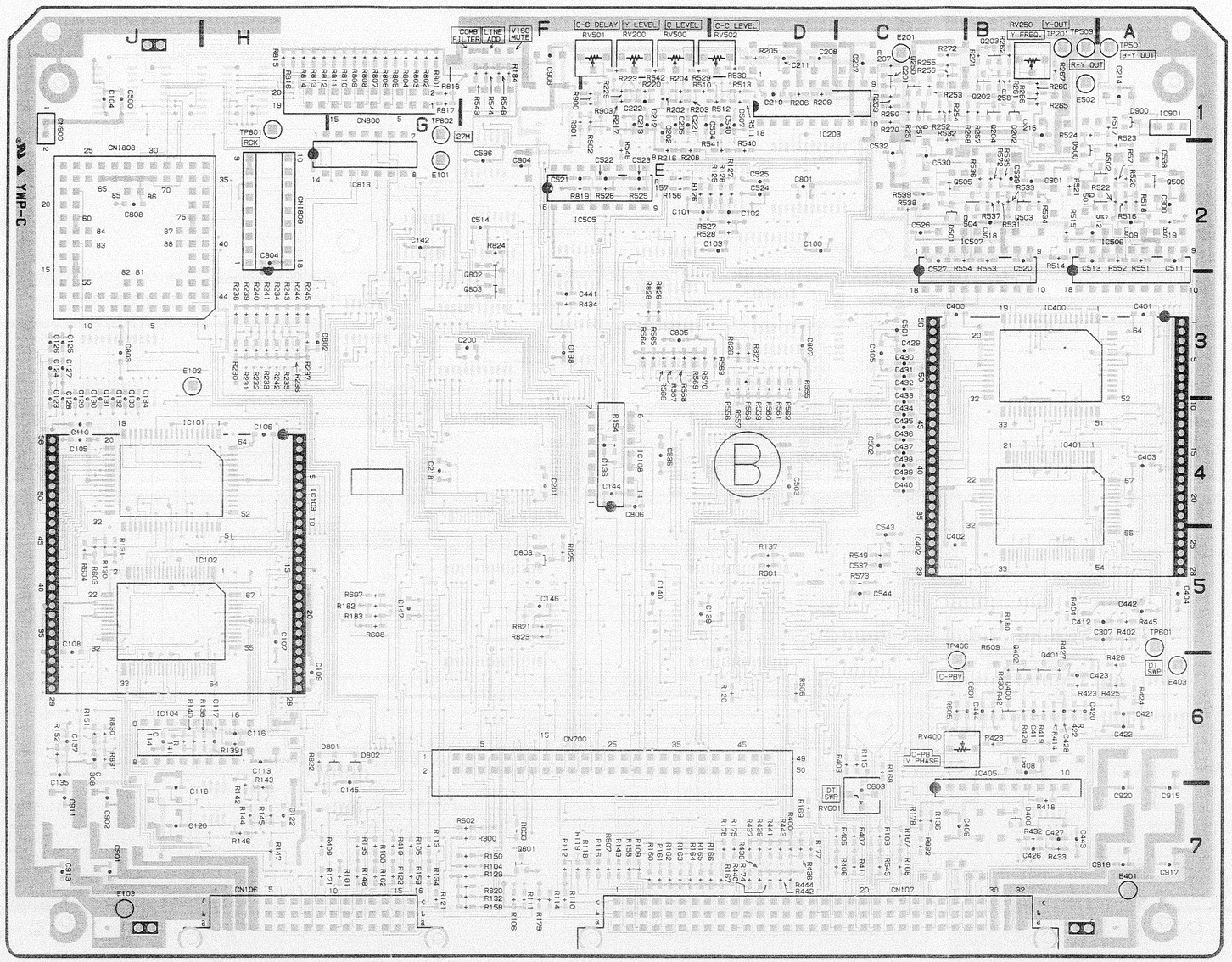
* REFER TO SCHEMATIC

TBC-12P (1-629-462-11,12,13)

CN1808	J-2	IC601	B-5	Q201	C-1
CN1809	H-2	IC603	B-5	Q202	B-1
		IC604	A-6	Q203	B-1
CN106	H-7	IC801	E-2	Q204	B-1
CN107	C-7	IC802	D-1	Q250	C-1
CN700	B-6	IC803	G-3	Q251	C-1
CN800	G-1	IC804	E-2	Q400	B-6
CN900	J-1	IC805	D-2	Q401	B-6
		IC806	J-3	Q402	B-6
CV102	A-2	IC807	H-3	Q500	A-2
CV103	B-2	IC808	J-2	Q501	A-2
		IC809	H-2	Q502	A-2
D202	B-1	IC810	J-1	Q503	B-2
D400	B-7	IC811	H-1	Q504	B-2
D500	B-2	IC812	J-1	Q505	B-2
D501	C-2	IC813	G-2	Q801	F-7
D801	G-6	IC814	E-3	Q802	F-2
D802	G-6	IC815	D-2	Q803	F-3
D803	F-5	IC816	D-3	Q900	F-1
D900	A-1	IC900	E-1		
		IC901	A-1	RV200	B-1
DL250	C-1			RV250	B-1
				RV400	C-6
E101	G-2			RV500	E-1
E102	J-3			RV501	E-1
E103	J-7			RV502	D-1
E201	C-1			RV601	C-7
E401	A-7				
E403	A-6			S500	F-1
E502	B-1				
				TP201	B-1
IC100	D-2			TP406	C-6
IC101	J-4			TP501	A-1
IC102	J-5			TP503	B-1
IC103	J-5			TP601	A-5
IC104	J-6			TP801	H-1
IC106	H-7			TP802	G-1
IC107	H-7				
IC108	B-4				
IC109	J-6				
IC110	G-2				
IC112	D-5				
IC113	F-5				
IC114	C-6				
IC200	F-3				
IC201	F-4				
IC202	E-1				
IC203	D-1				
IC204	E-1				
IC400	B-3				
IC401	B-4				
IC402	B-4				
IC403	E-3				
IC404	B-7				
IC405	B-7				
IC406	B-6				
IC407	A-6				
IC408	B-6				
IC409	A-5				
IC500	C-3				
IC501	C-4				
IC502	D-4				
IC504	F-2				
IC505	E-2				
IC506	A-2				
IC507	B-2				
IC508	C-5				
IC509	D-1				
IC510	G-7				
IC512	F-2				







TBC-12P —COMPONENT SIDE—
1-629-462-11,12,13
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

TBC-12P —SOLDERING SIDE—
1-629-462-11,12,13
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

TBC-9P; TIME BASE CORRECTOR
NR-25; Y DIGITAL NOISE REDUCTION

S/N 10001 through 10712

TBC-9P (1-622-550-12)

REF.NO.	TYPE	PIN NO. +12V	+5V	GND	−5V	−12V
IC 1	TC74HC00F		14	7		
IC 2	CX20061	1		5		
IC 4	CX7998		2	16		
IC 5	TC4053BF		16	7.8		
IC 6	CX7930A		28	14		
IC 7	SN74LS221NS		16	8		
IC 8	TC74HC74F		14	7		
IC 9	TC74HC221F		16	8		
IC 10	CX7930A		28	14		
IC 11	TC74HC86F		14	7		
IC 12	TL082CPS	8				4
IC 13	SN74LS123NS		16	8		
IC 14	NJM1496M					8
IC 16	TC74HC32F		14	7		
IC 17	μPC393G2		2	3		
IC 18	TL082CPS	8				4
IC 19	TC74HC123F	16		8		
IC 20	TL431CLPB	*	*	*	*	*
IC 21	CX7998		2	16		
IC 22	CXD1024Q		27.61	1.11.44		
IC 23	CX7930A		28	14		
IC 24	CX20162		28	14		
IC 25	74F74PC		14	7		
IC 26	TC74HC08F		14	7		
IC 27	TC74HC74F		14	7		
IC 28	TC74HC04F		14	7		
IC 29	TC74HC244F		20	10		
IC 30	SN74LS164NS		14	7		
IC 31	MC10H124M		9	16	8	
IC 32	TC74HC244F		20	10		
IC 33	TC74HC123F		16	8		
IC 34	SN74LS11NS		14	7		
IC 35	TC74HC86F		14	7		
IC 36	SN74LS164NS		14	7		
IC 37	TL431CLPB	*	*	*	*	*
IC 38	TC74HC74F		14	7		
IC 40	TC74HC74F		14	7		
IC 41	SN74LS221NS		16	8		
IC 42	SN74LS221NS		16	8		

* REFER TO SCHEMATIC

NR-25 (1-624-023-12)

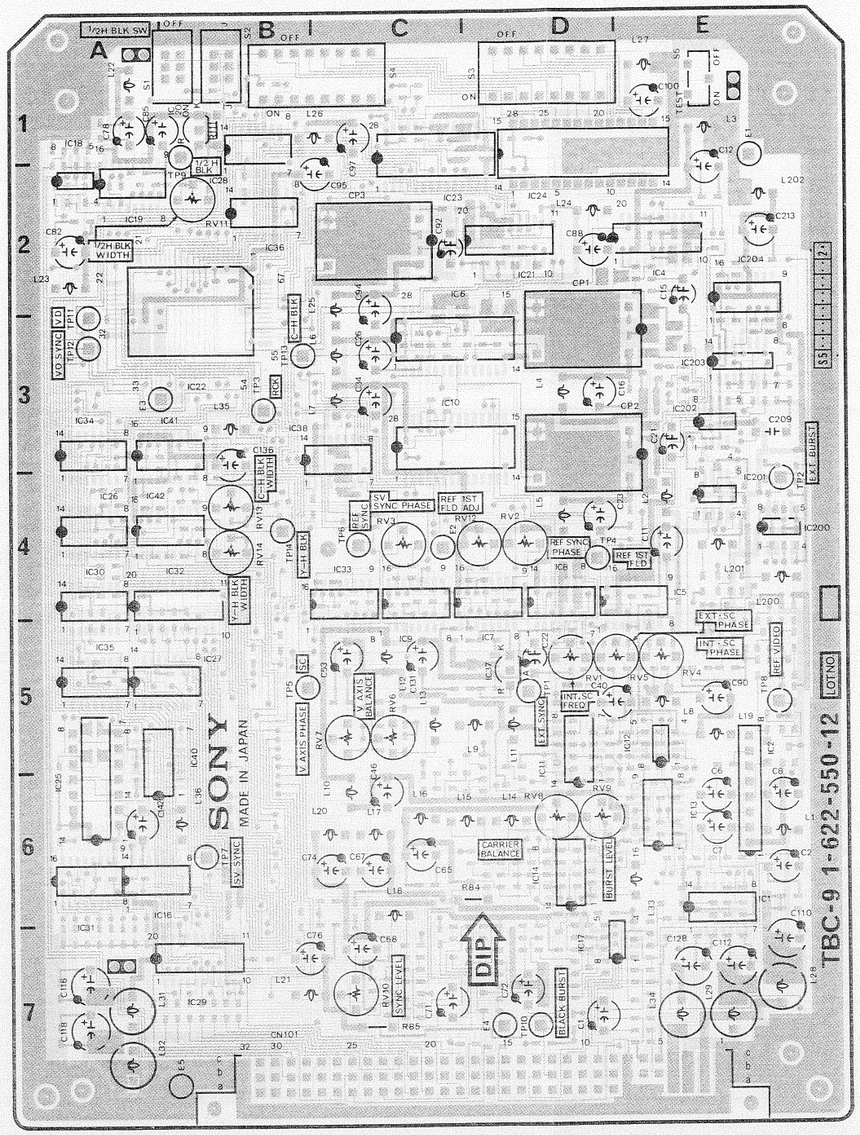
REF.NO.	TYPE	PIN NO. +5V	GND
IC 701	CXD1328Q	33.73	12.52
IC 702	CXK1202S	28	14
IC 703	CXK1202S	28	14
IC 704	CXK1202S	28	14
IC 705	SN74HC161NS	16	5.8
IC 706	SN74HC161NS	16	5.8
IC 707	SN74HC240NS	20	1.10.19

TBC-9P (1-622-550-12)

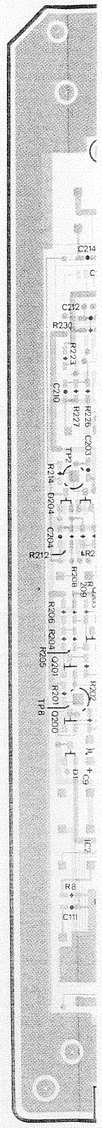
CN101	C-7	Q12	C-7
		Q13	C-7
CP1	D-3	Q14	C-7
CP2	D-3	Q15	D-7
CP3	C-2	Q16	D-7
		Q17	D-7
D1	E-5	Q18	D-7
D200	E-5	Q19	D-7
D201	E-5	Q20	D-5
D202	E-4	Q200	E-5
D203	E-4	Q201	E-5
D204	E-4	Q202	E-5
		Q203	E-5
E1	E-1	Q204	E-5
E2	C-4	Q205	E-4
E3	A-3		
E4	D-7	RV1	D-5
E5	B-7	RV2	D-4
		RV3	C-4
IC1	E-6	RV4	E-5
IC2	E-6	RV5	D-5
IC4	E-2	RV6	C-5
IC5	E-4	RV7	C-5
IC6	C-3	RV8	D-6
IC7	D-4	RV9	D-6
IC8	D-4	RV10	C-7
IC9	C-4	RV11	B-2
IC10	C-3	RV12	D-4
IC11	D-5	RV13	B-4
IC12	B-5	RV14	B-4
IC13	E-6		
IC14	D-6	S1	B-1
IC16	A-6	S2	B-1
IC17	D-7	S3	D-1
IC18	A-2	S4	C-1
IC19	A-2	S5	E-1
IC20	B-1		
IC21	D-2	SL1	E-2
IC22	B-2	SL2	E-2
IC23	C-1	SL3	E-3
IC24	D-1	SL4	D-3
IC25	A-6	SL5	D-3
IC26	A-4	SL6	D-2
IC27	A-5	SL7	C-2
IC28	B-1	SL8	D-2
IC29	B-7	SL9	E-3
IC30	A-4	SL10	E-3
IC31	A-6	SL11	E-3
IC32	B-4	SL12	E-4
IC33	C-4	SL13	E-4
IC34	A-3	SL14	E-4
IC35	A-5	SL15	E-3
IC36	B-2	SL16	E-3
IC37	D-5	SL17	D-4
IC38	C-3	SL18	D-4
IC40	A-5	SL19	C-3
IC41	B-3	SL20	C-4
IC42	B-4	SL21	E-5
IC200	E-4	SL22	D-2
IC201	E-4	SL23	D-2
IC202	E-3	SL24	D-1
IC203	E-3	SL25	D-1
IC204	E-2	SL26	D-1
		SL27	C-1
Q1	E-7	SL28	B-6
Q2	E-7	SL29	B-6
Q3	E-6	SL30	A-5
Q4	E-3	SL31	A-5
Q5	E-3		
Q6	D-5	TP1	D-5
Q7	D-6	TP2	E-4
Q8	D-5	TP3	B-3
Q9	D-6	TP4	D-4
Q10	C-5	TP5	B-5
Q11	D-6	TP6	C-4

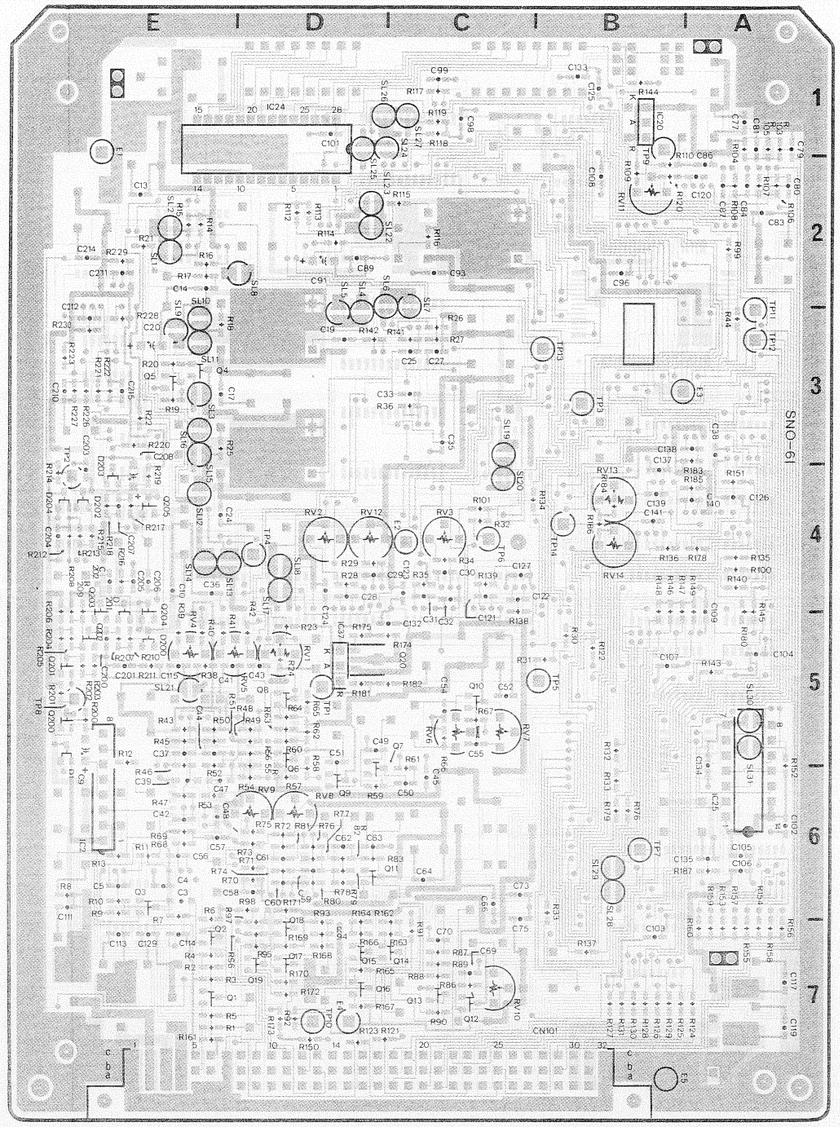
NR-25 (1-624-023-12)

CN701	B-3
D701	C-2
D702	C-3
EP701	C-2
IC701	A-2
IC702	B-1
IC703	C-1
IC704	C-2
IC705	B-3
IC706	C-3
IC707	B-2
TP701	A-1
TP702	A-2
TP703	A-2
TP704	A-2



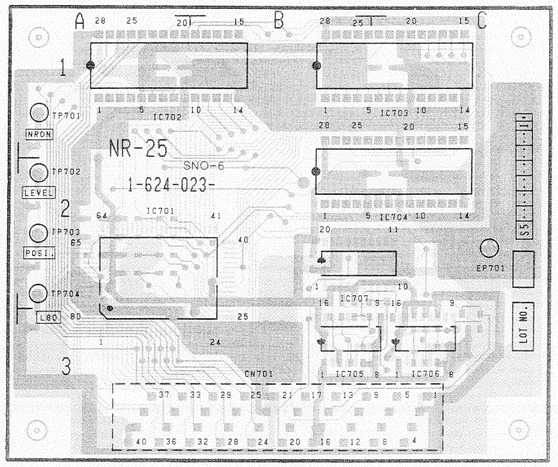
TBC-9P — COMPONENT SIDE —
1-622-550-12
BVW-60P BVW-95P
BVW-70P BVW-96P
BVW-75P





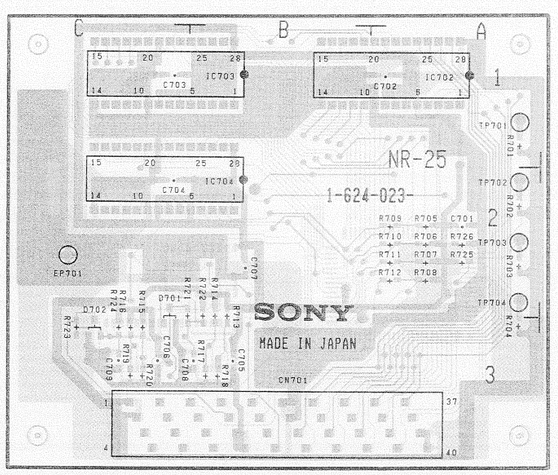
TBC-9P — SOLDERING SIDE —

1-622-550-12
BVW-60P BVW-95P
BVW-70P BVW-96P
BVW-75P



NR-25 — COMPONENT SIDE —

1-624-023-12
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



NR-25 — SOLDERING SIDE —

1-624-023-12
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

TBC-9P (1-622-550-13)

REF.NO.	TYPE	PIN.NO +12V	+5V	GND	−5V	−12V
IC 1	TC74HC00F		14	7		
IC 2	CX20061	1		5		
IC 4	CX7998		2	16		
IC 5	TC4053BF		16	7.8		
IC 6	CX7930A		28	14		
IC 7	TC74HC221F		16	8		
IC 8	TC74HC74F		14	7		
IC 9	TC74HC221F		16	8		
IC 10	CX7930A		28	14		
IC 11	TC74HC86F		14	7		
IC 12	TL082CPS	8				4
IC 13	SN74LS123NS		16	8		
IC 14	NJM1496M					8
IC 16	TC74HC32F		14	7		
IC 17	μPC393G2		2	3		
IC 18	TL082CPS	8				4
IC 19	TC74HC123F	16		8		
IC 20	TL431CLPB	*	*	*	*	*
IC 21	CX7998		2	16		
IC 22	CXD1024Q		27.61	1.11.44		
IC 23	CX7930A		28	14		
IC 24	CX20162		28	14		
IC 25	74F74PC		14	7		
IC 26	TC74HC08F		14	7		
IC 27	TC74HC74F		14	7		
IC 28	TC74HC04F		14	7		
IC 29	TC74HC244F		20	10		
IC 30	SN74LS164NS		14	7		
IC 31	MC10H124M		9	16	8	
IC 32	TC74HC244F		20	10		
IC 33	TC74HC123F		16	8		
IC 34	SN74LS11NS		14	7		
IC 35	TC74HC86F		14	7		
IC 36	SN74LS164NS		14	7		
IC 37	TL431CLPB	*	*	*	*	*
IC 38	TC74HC74F		14	7		
IC 40	TC74HC74F		14	7		
IC 41	SN74LS221NS		16	8		
IC 42	SN74LS221NS		16	8		
IC 200	MB4002PF	8		1		*
IC 201	TL082CPS	8				4
IC 202	TL051CPS	8		1		5
IC 203	μPC319G2	11		3,8		6
IC 204	TC74HC221F		16	8		

* REFER TO SCHEMATIC

TBC-9P (1-622-550-13)

CN101	C-7	IC300	B-6
CN201	E-1	IC301	A-6
		IC302	C-1
CP1	D-3	IC303	A-5
CP2	D-3		
CP3	C-2	Q1	B-7
		Q2	E-7
D1	E-5	Q3	E-6
D200	E-5	Q4	B-3
D201	E-5	Q5	E-3
D202	E-4	Q6	D-5
D203	E-4	Q7	D-6
D204	E-4	Q8	D-5
D205	B-4	Q9	D-6
		Q10	C-5
E1	E-1	Q11	D-6
E2	C-4	Q12	C-7
E3	A-3	Q13	C-7
E4	D-7	Q14	C-7
E5	B-7	Q15	D-7
		Q16	D-7
IC1	E-6	Q17	D-7
IC2	E-6	Q18	D-7
IC4	E-2	Q19	D-7
IC5	E-4	Q20	D-5
IC6	C-3	Q200	E-5
IC7	D-4	Q201	E-5
IC8	D-4	Q202	E-5
IC9	C-4	Q203	E-5
IC10	C-3	Q204	E-5
IC11	D-5	Q205	E-4
IC12	E-5		
IC13	E-6	RV1	D-5
IC14	D-6	RV2	D-4
IC16	A-6	RV3	C-4
IC17	D-7	RV4	E-5
IC18	A-2	RV5	D-5
IC19	A-2	RV6	C-5
IC20	B-1	RV7	C-5
IC21	D-2	RV8	D-6
IC22	B-2	RV9	D-6
IC23	C-1	RV10	C-7
IC24	D-1	RV11	B-2
IC25	A-6	RV12	C-4
IC26	B-1	RV13	B-4
IC27	A-5	RV14	B-4
IC28	B-1	RV15	C-3
IC29	B-7		
IC30	A-4	S3	D-1
IC31	A-6	S4	C-1
IC32	B-4		
IC33	C-4	TH1	E-4
IC34	A-3		
IC35	A-5	TP1	D-5
IC36	B-2	TP2	E-4
IC37	D-5	TP3	B-3
IC38	C-3	TP4	C-4
IC40	A-5	TP5	B-5
IC41	B-3	TP6	C-4
IC42	B-4	TP7	B-6
IC200	B-4	TP8	E-5
IC201	E-4	TP9	A-1
IC202	B-3	TP10	D-7
IC203	E-3	TP11	A-3
IC204	E-2	TP12	A-3
		TP13	B-3
		TP14	B-4

NR-32 (1-629-463-11)

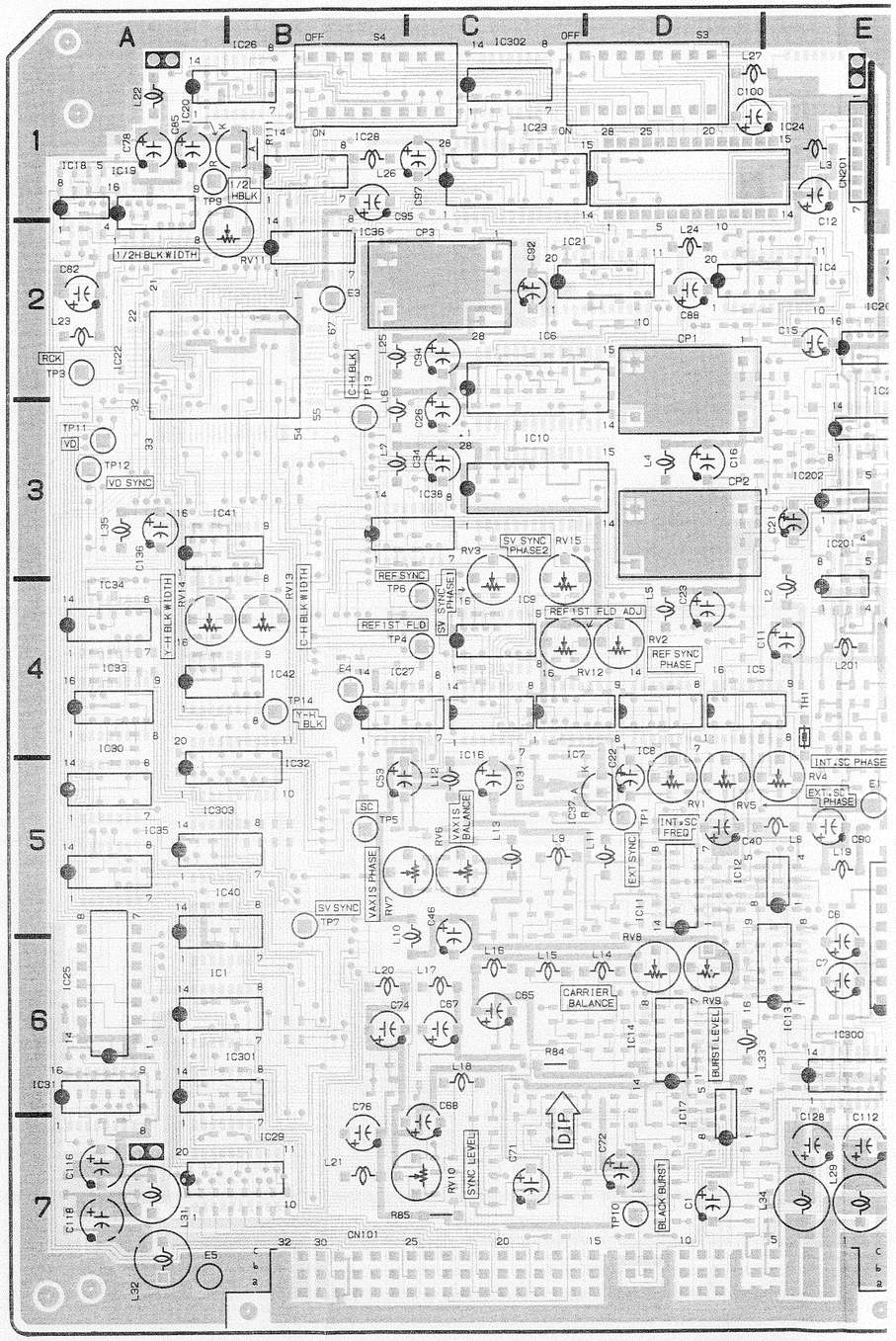
REF.NO.	TYPE	PIN NO. +5V	GND
IC 701	CXD1328Q	33.73	12.52
IC 702	CXK1202S	28	14
IC 703	CXK1202S	28	14
IC 704	CXK1202S	28	14
IC 705	SN74HC161NS	16	8
IC 706	SN74HC161NS	16	8
IC 707	SN74HC240NS	20	10
IC 708	SN74HC273NS	1.20	10
IC 709	SN74HC161NS	16	8
IC 710	CX23065	5	8
IC 711	CX23065	5	8
IC 712	74F04PC	14	7
IC 713	74F74PC	14	7
IC 714	CXD1045AQ	17.39	1.6.28
IC 715	CXD1045AQ	17.39	1.6.28
IC 716	SN74LS221NS	16	8
IC 717	74F32PC	14	7
IC 718	74F175PC	16	8
IC 719	74F163APC	16	8
IC 720	SN74HC74NS	14	7
IC 721	SN74LS164NS	9.14	7
IC 722	SN74HC161NS	16	8
IC 723	SN74HC161NS	16	8
IC 724	SN74HC00NS	14	7
IC 725	SN74LS158NS	16	8
IC 726	SN74LS164NS	9.14	7

NR-32 (1-629-463-11)

CN701	C-4	IC712	D-4
		IC713	D-3
CP701	E-3	IC714	D-1
CP702	B-4	IC715	C-1
		IC716	C-2
CV701	C-3	IC717	C-4
		IC718	D-4
DL701	E-2	IC719	C-4
DL702	E-2	IC720	C-1
		IC721	C-1
E701	B-2	IC722	C-2
		IC723	C-2
IC701	B-2	IC724	D-2
IC702	A-3	IC725	D-2
IC703	A-3	IC726	C-3
IC704	A-2		
IC705	B-1	RV701	C-3
IC706	A-1	RV702	C-3
IC707	B-1		
IC708	A-1	TP701	A-2
IC709	A-1	TP702	B-2
IC710	E-3	TP703	B-2
IC711	E-4		

TBC-9P ; TIME BASE CORRECTOR
NR-32 ; Y DIGITAL NOISE REDUCTION, READ CLOCK GENERATOR

S/N 10061 and higher

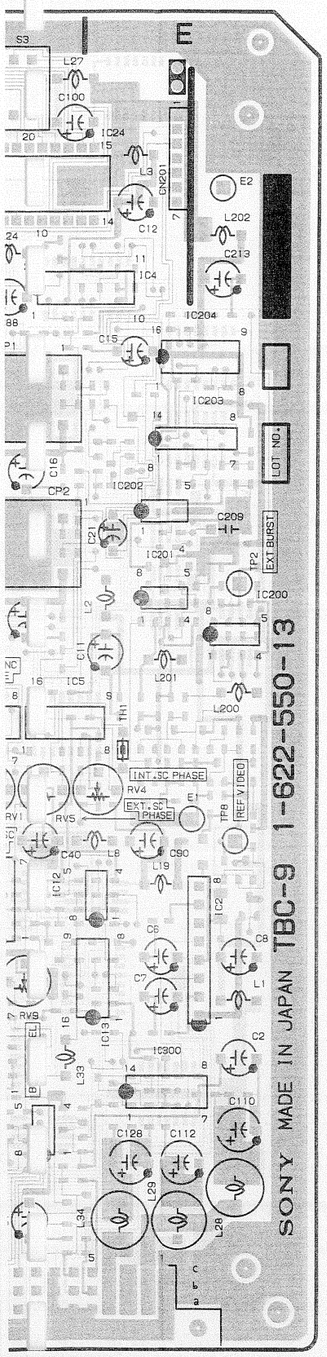


TBC-9P — COMP

1-622-550-13

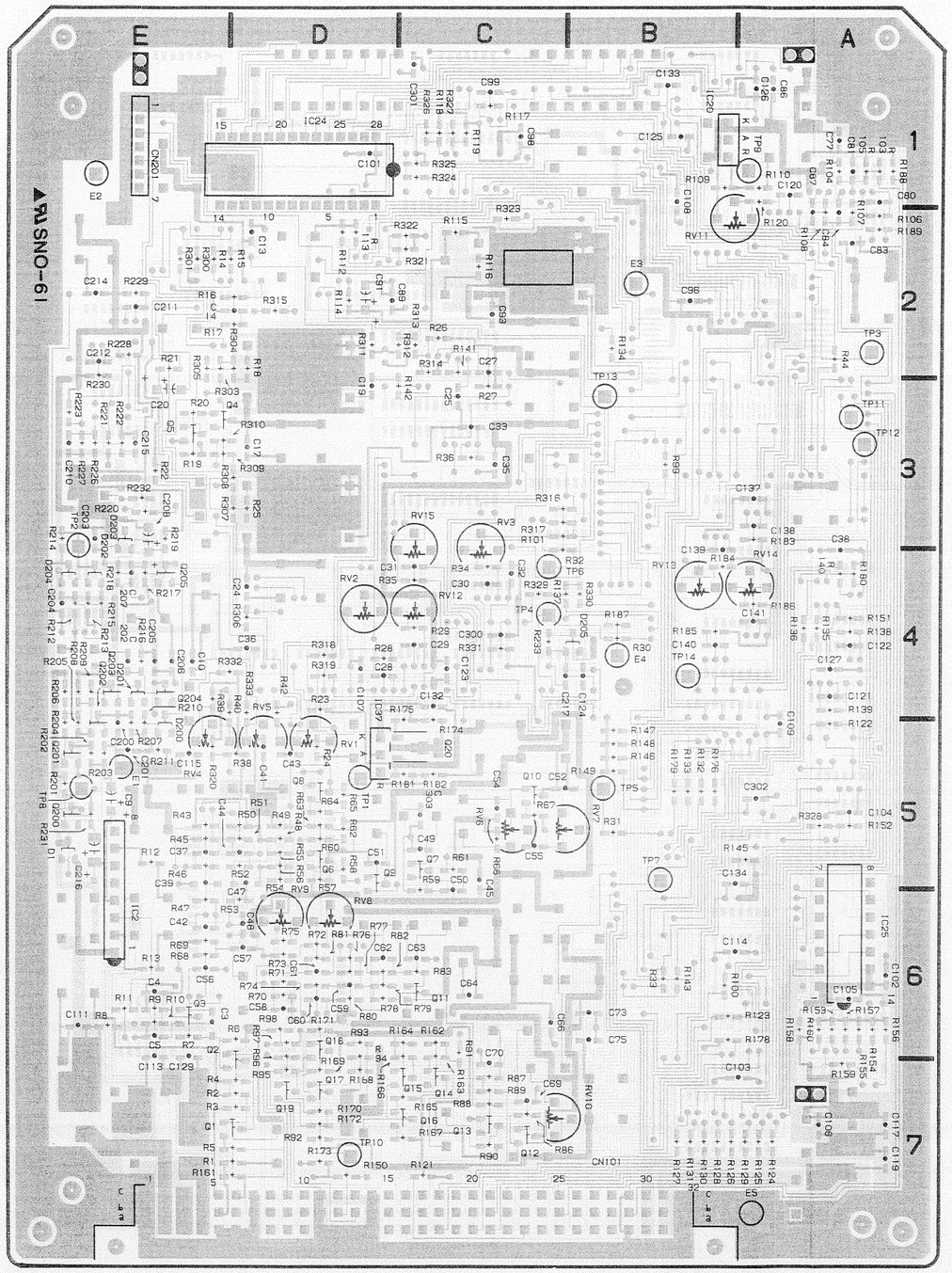
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

gher



TBC-9P — COMPONENT SIDE —

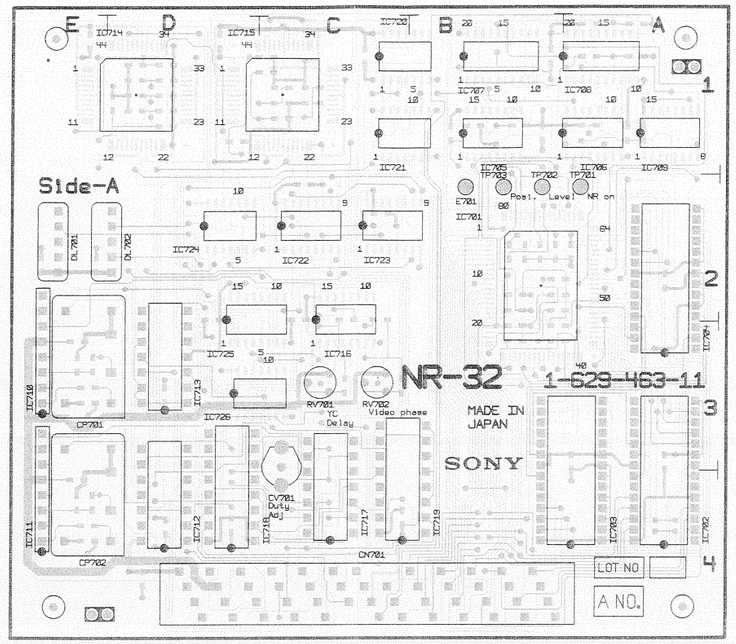
1-622-550-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



TBC-9P — SOLDERING SIDE —

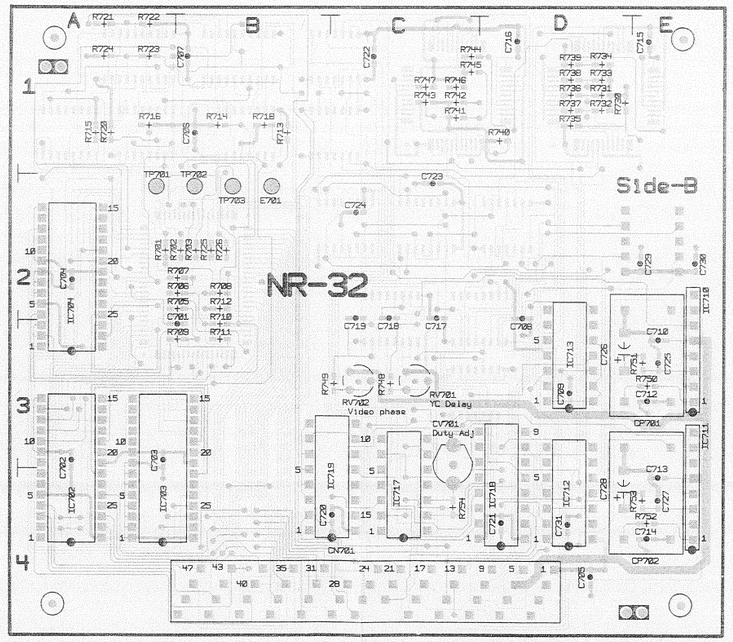
1-622-550-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

S/N 10713 and higher



NR-32 — COMPONENT SIDE —

1-629-463-11
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P



NR-32 — SOLDERING SIDE —

1-629-463-11
BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

EN-48P (1-622-546-13)

REF.NO	TYPE	PIN NO.							
		+12V	+9V	+8V	+5V	GND	−5V	−8V	−12V
IC 1	MC34184M			4				11	
IC 2	VA UNIT				6		1		
IC 3	TC4066BF				16	8			
IC 4	CX20017		16			2.10			
IC 5	CX20158				12	7.10.14			
IC 6	TL082CPS			8				4	
IC 10	MC10H124M				9	16	8		
IC 11	MC10H131M					1.16	8		
IC 12	SN74LS00NS				14	7			
IC 13	MC10H113M					1.16	8		
IC 14	TC74HC04F				14	7			
IC 15	MC74HC11F				14	7			
IC 16	SN74LS74ANS				14	7			
IC 17	TL082CPS	8							4
IC 18	TC74HC123F				16	8			
IC 19	SN74LS221NS				16	8			
IC 20	CX23065				5	8			
IC 21	SN74LS04NS				14	7			
IC 22	SN74LS163ANS				16	8			
IC 24	MB4002PF	8					4		
IC 25	SN74LS74ANS				14	7			
IC 27	SN74LS221NS				16	8			
IC 31	SN74LS74NS				14	7			
IC 32	SN74LS221NS				16	8			
IC 33	SN74LS221NS				16	8			
IC 34	TC74HC74F				14	7			
IC 35	TL082CPS			8				4	
IC 36	SN74LS221NS				16	8			
IC 37	SN74LS32NS				14	7			
IC 38	TC4053BF				16	8			
IC 39	TC74HC221F				16	8			
IC 50	MC34184M				4		11		
IC 51	CX20158				12	7.10.14			
IC 52	VA UNIT				6		1		
IC 53	CX20158				12	7.10.14			
IC 54	TC4053BF				16	8			
IC 55	VA UNIT				6		1		
IC 60	VA UNIT				6		1		
IC 70	TL082CPS				8		4		
IC 71	CX20158				12	5.7.10			
IC 72	VA UNIT				6		1		
IC 101	NJM78L09A	*	*	*	*	*	*	*	*
IC 102	NJM79L05A	*	*	*	*	*	*	*	*
IC 103	S-81230AG	*	*	*	*	1	*	*	*
IC 104	S-80230AG	*	*	*	*	1	*	*	*
IC 105	TL431CLPB	*	*	*	*	*	*	*	*
IC 106	NJM78L05A	*	*	*	*	*	*	*	*
IC 107	NJM78L08A	*	*	*	*	*	*	*	*
IC 108	NJM79L05A	*	*	*	*	*	*	*	*
IC 109	NJM79L08A	*	*	*	*	*	*	*	*
IC 110	NJM78L05A	*	*	*	*	*	*	*	*
IC 111	NJM78L08A	*	*	*	*	*	*	*	*
IC 112	NJM79L05A	*	*	*	*	*	*	*	*
IC 113	NJM79L08A	*	*	*	*	*	*	*	*
IC 114	TL431CLPB	*	*	*	*	*	*	*	*
IC 201	MC10H124M			9	16	8			
IC 202	MC10H131M				1.16	8			
IC 203	MC10H113M								
IC 204	CX23065			5	8				
IC 206	SN74LS163ANS			16	8				
IC 501	NJM1496M								14
IC 601	NJM1496M								14
IC 701	TC74HC123F		16			8			
IC 702	SN74LS123NS		16			8			
IC 703	TL082CPS		8						4
IC 704	SN74LS74ANS		14			7			
IC 705	TL082CPS	8							4

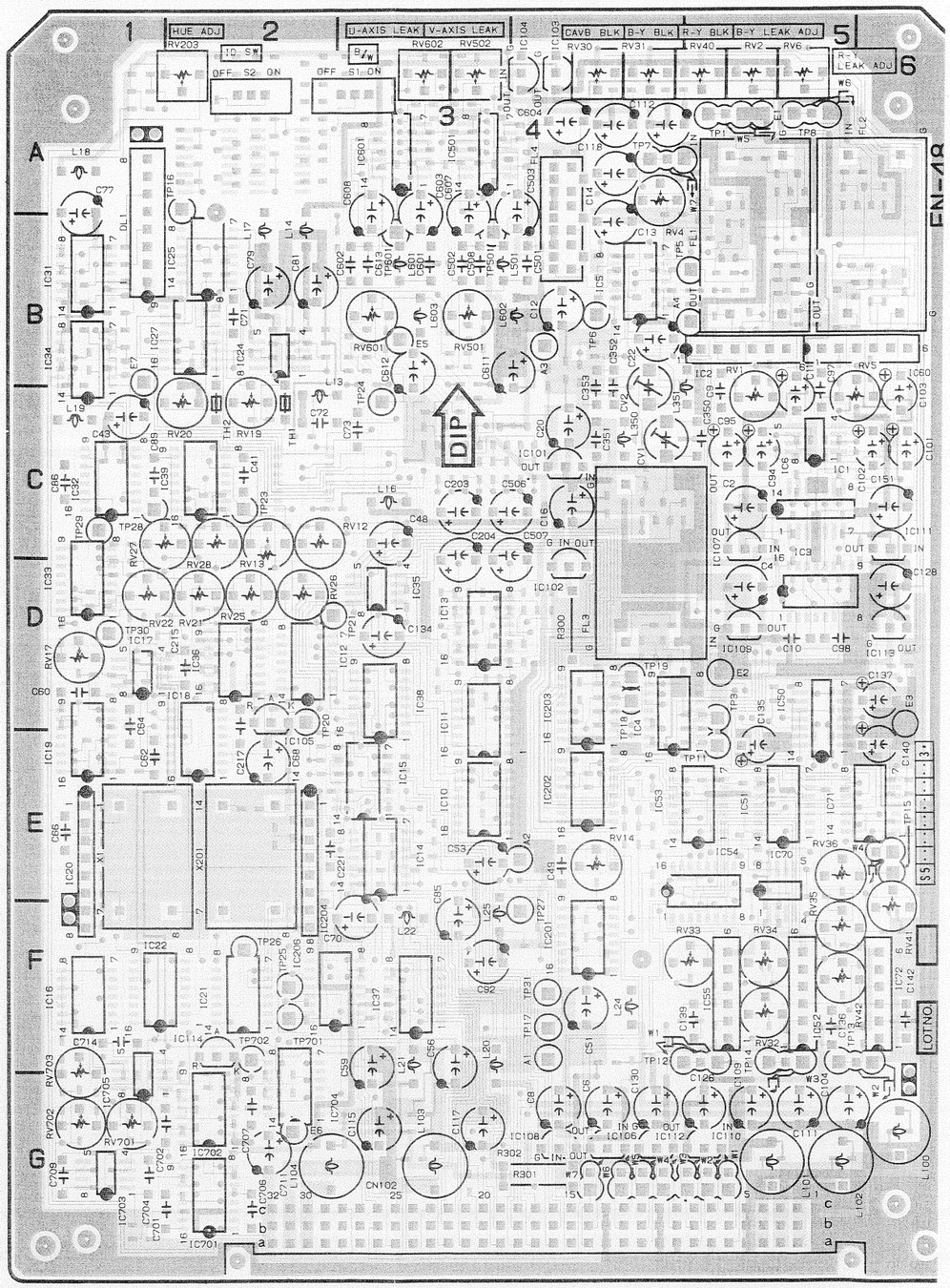
* REFER TO SCHEMATIC

EN-48P (1-622-546-13)

CN102	G-3	IC114	F-2	S1	A-3
		IC201	F-4	S2	A-2
CV1	C-4	IC202	E-4	S5	G-7
CV2	C-4	IC203	D-4		
		IC204	E-2	SL1	F-5
D1	B-1	IC206	F-2	SL2	E-6
		IC501	A-3	SL350	C-4
DL1	B-1	IC601	A-3	SL351	C-4
		IC701	G-2		
E1	A-5	IC702	G-2	TH1	C-2
E2	D-5	IC703	G-1	TH2	C-2
E3	D-6	IC704	G-2		
E5	B-3	IC705	G-1	TP1	A-5
E6	G-2			TP3	D-5
E7	B-1	Q1	A-5	TP5	B-5
		Q2	B-5	TP6	B-4
FL1	B-5	Q3	D-4	TP7	A-4
FL2	B-6	Q4	B-4	TP8	A-5
FL3	D-4	Q5	C-4	TP11	B-5
FL4	A-4	Q6	B-6	TP12	F-5
		Q7	B-5	TP13	F-5
IC1	C-5	Q8	B-5	TP14	F-5
IC2	B-5	Q9	B-4	TP15	B-6
IC3	D-5	Q10	B-4	TP16	A-2
IC4	D-4	Q11	A-5	TP17	F-4
IC5	B-4	Q12	C-4	TP18	D-4
IC6	C-5	Q13	B-4	TP19	D-4
IC10	E-3	Q14	B-5	TP20	D-2
IC11	D-3	Q25	B-1	TP21	D-2
IC12	D-2	Q501	B-3	TP23	C-2
IC13	D-3	Q502	A-4	TP24	C-3
IC14	E-3	Q503	C-3	TP25	F-2
IC15	E-3	Q504	C-4	TP26	F-2
IC16	F-1	Q601	B-3	TP27	F-4
IC17	D-1	Q602	A-3	TP28	C-1
IC18	E-2	Q603	A-4	TP29	C-1
IC19	E-1	Q604	C-3	TP30	D-1
IC20	E-1	Q605	C-3	TP31	F-4
IC21	F-2			TP501	B-3
IC22	F-1	RV1	C-5	TP601	B-3
IC24	B-2	RV2	A-5	TP701	F-2
IC25	B-2	RV4	A-4	TP702	F-2
IC27	B-2	RV5	C-5		
IC31	B-1	RV6	A-5	X1	B-1
IC32	C-1	RV12	C-2	X201	E-2
IC33	D-1	RV13	C-2		
IC34	B-1	RV14	E-4		
IC35	D-3	RV17	D-1		
IC36	D-2	RV19	C-2		
IC37	F-3	RV20	C-2		
IC38	D-3	RV21	D-2		
IC39	C-2	RV22	D-1		
IC50	D-5	RV25	D-2		
IC51	B-5	RV26	D-2		
IC52	F-5	RV27	C-2		
IC53	E-5	RV28	C-2		
IC54	B-5	RV30	A-4		
IC55	F-5	RV31	A-4		
IC60	B-6	RV32	F-5		
IC70	B-5	RV33	F-5		
IC71	B-6	RV34	F-5		
IC72	F-6	RV35	F-5		
IC101	C-4	RV36	E-5		
IC102	D-4	RV40	A-5		
IC103	A-4	RV41	F-6		
IC104	A-4	RV42	F-5		
IC105	D-2	RV203	A-2		
IC106	G-4	RV501	B-3		
IC107	C-5	RV502	A-3		
IC108	G-4	RV601	B-3		
IC109	D-5	RV602	A-3		
IC110	G-5	RV701	G-1		
IC111	C-6	RV702	G-1		
IC112	G-4	RV703	G-1		
IC113	D-6				

EN-48P; C ENCODER

S/N 10001 through 10060



EN-48P — COMPONENT SIDE

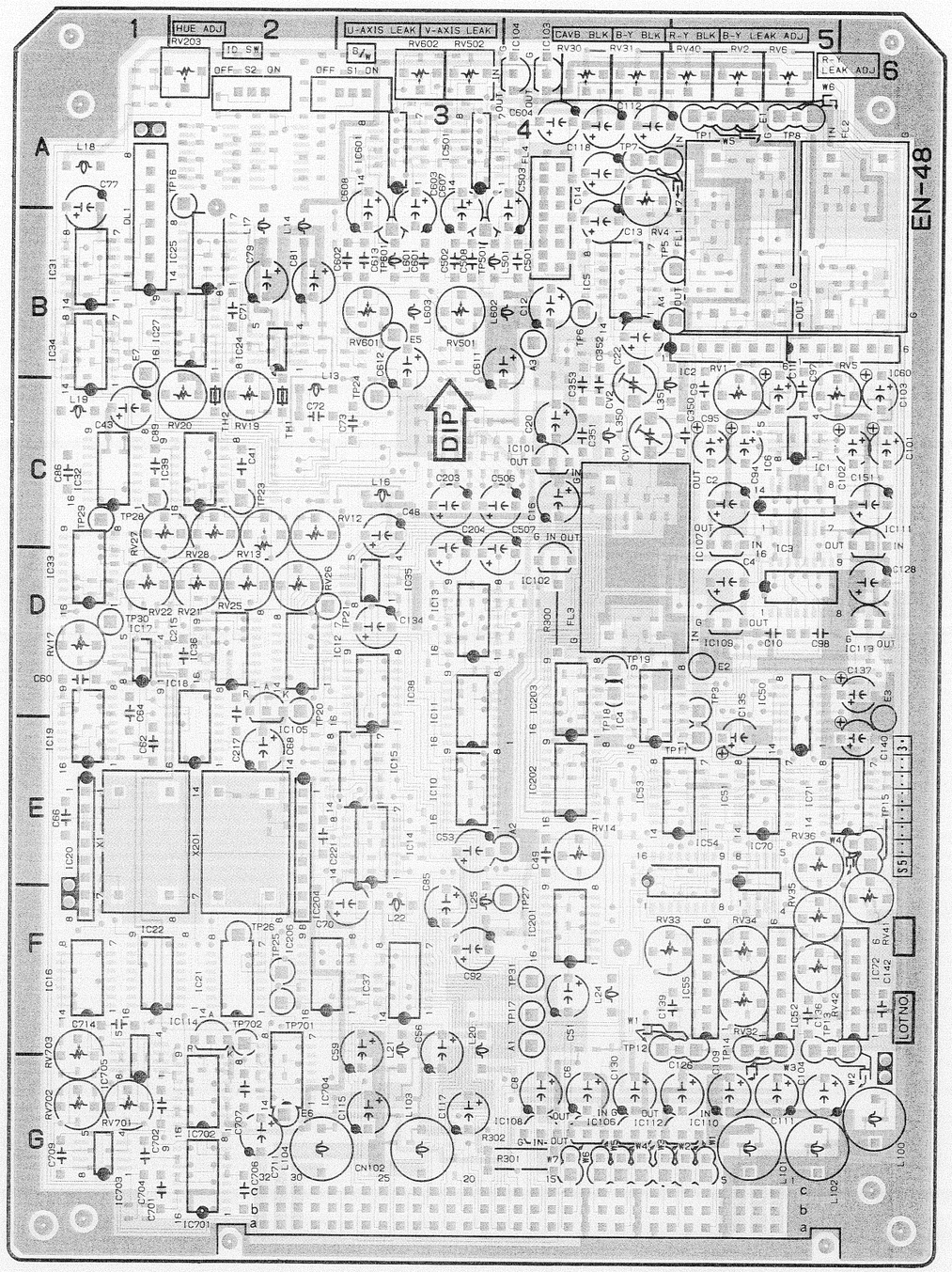
1-622-546-13

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

EN-48P; C ENCODER

S/N 10001 through 10060

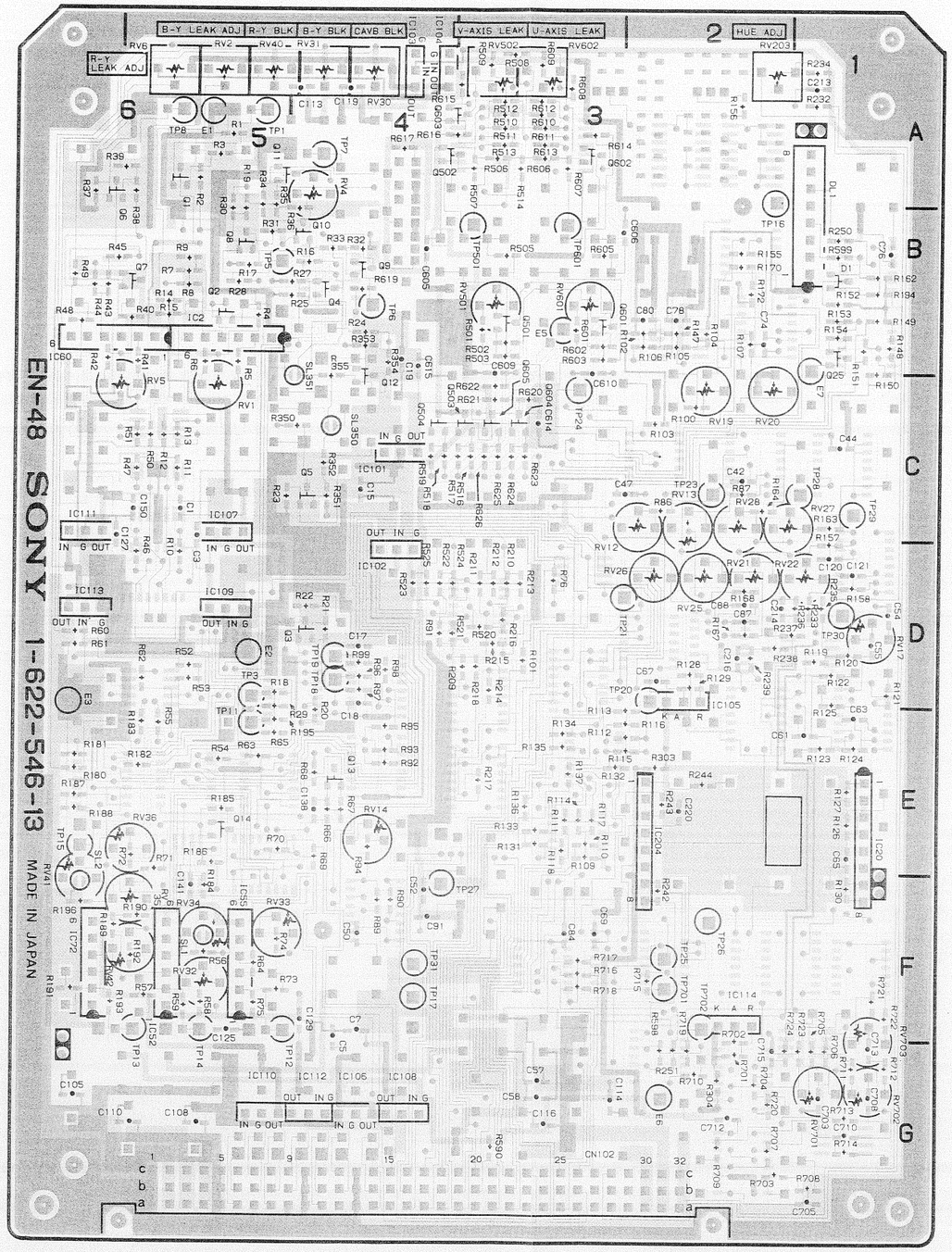
F-2	S1	A-3
F-4	S2	A-2
F-	S5	G-7
D		
E	SL1	F-5
F-2	SL2	E-6
A-3	SL350	C-4
A	SL351	C-4
G		
G	TH1	C-2
G-1	TH2	C-2
G-2		
G	TP1	A-5
	TP3	D-5
A	TP5	B-5
B-5	TP6	B-4
D-4	TP7	A-4
B	TP8	A-5
C	TP11	E-5
B	TP12	F-5
B-5	TP13	F-5
B-5	TP14	F-5
B	TP15	E-6
B	TP16	A-2
A	TP17	F-4
C-4	TP18	D-4
E-4	TP19	D-4
E	TP20	D-2
B	TP21	D-2
B-	TP23	C-2
A-4	TP24	C-3
C-3	TP25	F-2
C	TP26	F-2
B	TP27	F-4
A-	TP28	C-1
A-4	TP29	C-1
C-3	TP30	D-1
C	TP31	F-4
	TP501	B-3
C-5	TP601	B-3
A-5	TP701	F-2
A	TP702	F-2
C		
A	X1	E-1
C-2	X201	E-2



EN-48P — COMPONENT SIDE —

1-622-546-13

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



EN-48P — SOLDERING SIDE —

1-622-546-13

BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

EN-48P (1-622-546-14,15)

REF.NO.	TYPE	PIN NO.							
		+12V	+9V	+8V	+5V	GND	−5V	−8V	−12V
IC 1	MC34184M			4				11	
IC 2	VA UNIT				6		1		
IC 3	MC14503BF				16	8	7		
IC 4	CX20017		16			2.10	5		
IC 5	CX20158				12	5.7.10	1		
IC 6	TL082CPS			8				4	
IC 10	MC10H124M				9	16	8		
IC 11	MC10H131M					1.16	8		
IC 12	SN74LS00NS				14	7			
IC 13	MC10H113M					1.16	8		
IC 14	TC74HC04F				14	7			
IC 15	MC74HC11F				14	7			
IC 16	SN74LS74ANS				14	7			
IC 17	TL082CPS	8							4
IC 18	TC74HC123F				16	8			
IC 19	SN74LS221NS				16	8			
IC 20	CX23065A				5	8			
IC 21	SN74LS04NS				14	7			
IC 22	SN74LS163ANS				16	8			
IC 24	MB4002PF	8					4		
IC 25	SN74LS74ANS				14	7			
IC 26	SN74LS06NS				14	7			
IC 27	SN74LS221NS				16	8			
IC 31	SN74LS74NS				14	7			
IC 32	SN74LS221NS				16	8			
IC 33	SN74LS221NS				16	8			
IC 34	TC74HC74F				14	7			
IC 35	TL082CPS			8			4		
IC 36	SN74LS221NS				16	8			
IC 37	SN74LS32NS				14	7			
IC 38	TC4053BF				16	8	7		
IC 39	TC74HC221F				16	8			
IC 50	MC34184M				4		11		
IC 51	CX20158				12	5.7.10	1		
IC 52	VA UNIT				6		1		
IC 53	CX20158				12	5.7.10	1		
IC 54	TC14053BF				16	8			
IC 55	VA UNIT				6		1		
IC 60	VA UNIT				6		1		
IC 70	TL082CPS				8		4		
IC 71	CX20158				12	5.7.10			
IC 72	CX20158				14	5.7.10	1		
IC 101	NJM78L09A	*	*	*	*	*	*	*	*
IC 102	NJM79L05A	*	*	*	*	*	*	*	*
IC 103	S-81230AG	*	*	*	*	1	*	*	*
IC 104	S-80230AG	*	*	*	*	1	*	*	*
IC 105	TL431CLPB	*	*	*	*	*	*	*	*
IC 106	NJM78L05A	*	*	*	*	*	*	*	*
IC 107	NJM78L08A	*	*	*	*	*	*	*	*
IC 108	NJM79L05A	*	*	*	*	*	*	*	*
IC 109	NJM79L08A	*	*	*	*	*	*	*	*
IC 110	NJM78L05A	*	*	*	*	*	*	*	*
IC 111	NJM78L08A	*	*	*	*	*	*	*	*
IC 112	NJM79L05A	*	*	*	*	*	*	*	*
IC 113	NJM79L08A	*	*	*	*	*	*	*	*
IC 114	TL431CLPB	*	*	*	*	*	*	*	*
IC 115	NJM79L08A	*	*	*	*	*	*	*	*
IC 116	NJM78L05A	*	*	*	*	*	*	*	*
IC 117	NJM79L05A	*	*	*	*	*	*	*	*
IC 201	MC10H124M			9	16	8			
IC 202	MC10H131M					1.16	8		
IC 203	MC10H113M					1.16	8		
IC 204	CX23065A				5	8			
IC 206	SN74LS163ANS				16	8			
IC 501	NJM1496M								14
IC 601	NJM1496M								14
IC 701	TC74HC123F		*			8			
IC 702	SN74LS123NS		*			8			
IC 703	TL082CPS	8							4
IC 704	SN74LS74ANS		*			7			
IC 705	TL082CPS	8							4

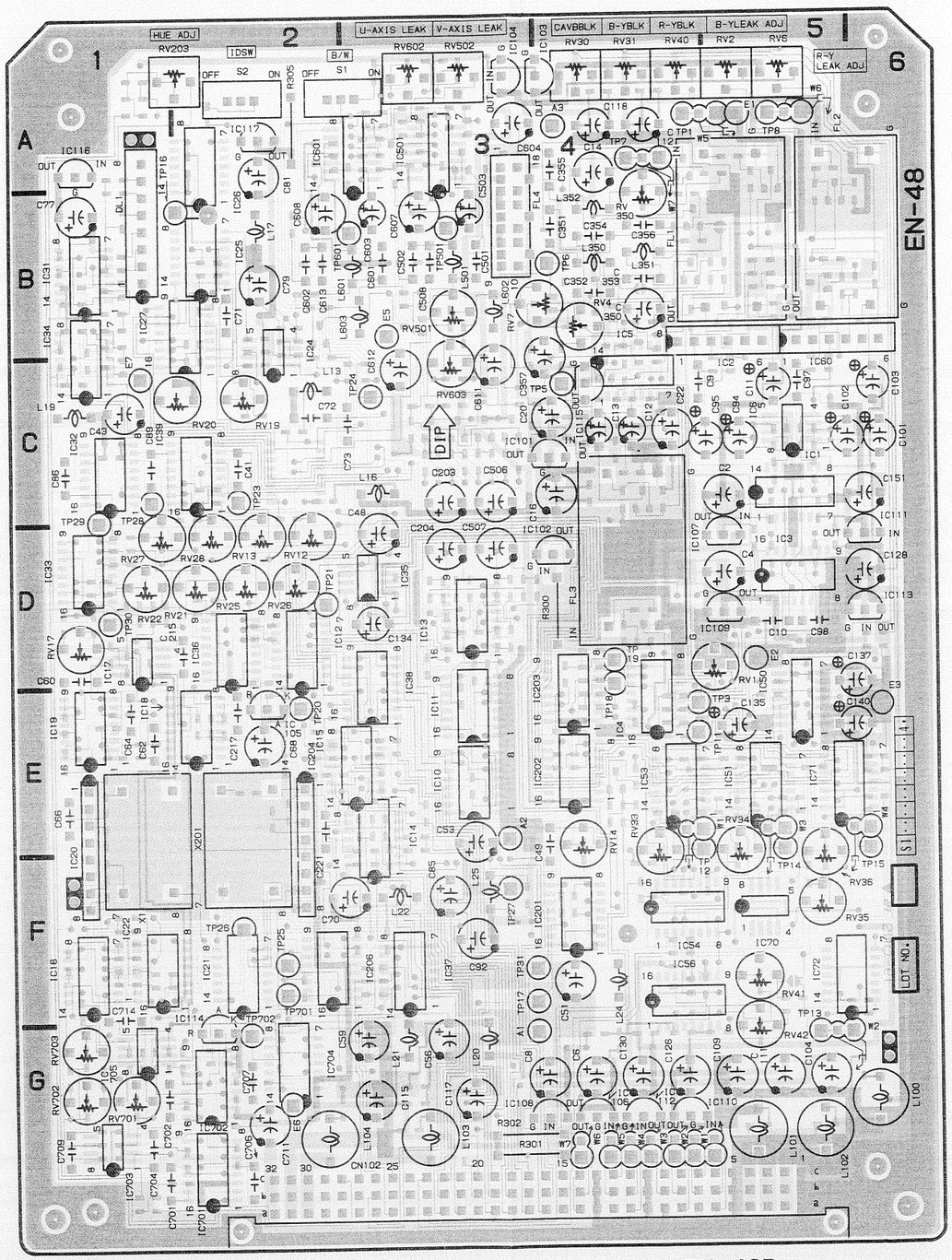
* REFER TO SCHEMATIC

EN-48P (1-622-546-14,15)

CN102	G-3	IC115	C-4	RV602	A-3
		IC116	A-1	RV603	C-3
D1	B-1	IC117	A-2	RV701	G-1
		IC127	D-2	RV702	G-1
DL1	B-1	IC201	F-4	RV703	G-1
		IC202	E-4		
E1	A-5	IC203	D-4	S1	A-3
E2	D-5	IC204	E-2	S2	A-2
E3	E-6	IC206	F-2		
E5	B-3	IC501	A-3	SL1	F-5
E6	G-2	IC601	A-3	SL2	E-6
E7	B-1	IC701	G-2	SL350	C-4
		IC702	G-2	SL351	C-4
FL1	B-5	IC703	G-1	SL601	C-3
FL2	B-6	IC704	G-2		
FL3	D-4	IC705	G-1	TP1	A-5
FL4	A-4			TP3	D-5
		Q1	A-5	TP5	B-5
IC1	C-5	Q2	B-5	TP6	B-4
IC2	B-5	Q3	D-4	TP7	A-4
IC3	D-5	Q4	B-4	TP8	A-5
IC4	D-4	Q6	B-6	TP11	E-5
IC5	B-4	Q7	B-5	TP12	F-5
IC6	C-5	Q8	B-5	TP13	F-5
IC10	E-3	Q9	B-4	TP14	F-5
IC11	D-3	Q10	B-4	TP15	E-6
IC12	D-2	Q11	A-5	TP16	A-2
IC13	D-3	Q13	E-4	TP17	F-4
IC14	E-3	Q14	E-5	TP18	D-4
IC15	E-3	Q15	B-4	TP19	D-4
IC16	F-1	Q17	B-5	TP20	D-2
IC17	D-1	Q18	A-5	TP21	D-2
IC18	E-2	Q25	B-1	TP23	C-2
IC19	E-1	Q501	B-3	TP24	C-3
IC20	E-1	Q502	A-4	TP25	F-2
IC21	F-2	Q503	C-3	TP26	F-2
IC22	F-1	Q504	C-4	TP27	F-4
IC24	B-2	Q601	B-3	TP28	C-1
IC25	B-2	Q602	A-3	TP29	C-1
IC26	A-2	Q603	A-4	TP30	D-1
IC27	B-2	Q604	C-3	TP31	F-4
IC31	B-1	Q605	C-3	TP501	B-3
IC32	C-1			TP601	B-3
IC33	D-1	RV1	C-5	TP701	F-2
IC34	B-1	RV2	A-5	TP702	F-2
IC35	D-3	RV4	A-4		
IC36	D-2	RV6	A-5	X1	B-1
IC37	F-3	RV7	B-3	X201	B-2
IC38	D-3	RV12	C-2		
IC39	C-2	RV13	C-2		
IC50	D-5	RV14	E-4		
IC51	E-5	RV17	D-1		
IC53	E-5	RV19	C-2		
IC54	E-5	RV20	C-2		
IC56	E-5	RV21	D-2		
IC60	B-6	RV22	D-1		
IC70	B-5	RV25	D-2		
IC71	E-6	RV26	D-2		
IC72	F-6	RV27	C-2		
IC101	C-4	RV28	C-2		
IC102	D-4	RV30	A-4		
IC103	A-4	RV31	A-4		
IC104	A-4	RV33	F-5		
IC105	D-2	RV34	F-5		
IC106	G-4	RV35	F-5		
IC107	C-5	RV36	E-5		
IC108	G-4	RV40	A-4		
IC109	D-5	RV41	F-6		
IC110	G-5	RV42	F-5		
IC111	C-6	RV203	A-2		
IC112	G-4	RV350	B-2		
IC113	D-6	RV501	B-3		
IC114	F-2	RV502	A-3		

EN-48P; C ENCODER

S/N 10061 and higher



EN-48P —COMPONENT SIDE—

1-622-546-14,15

BVW-60P BVW-70P

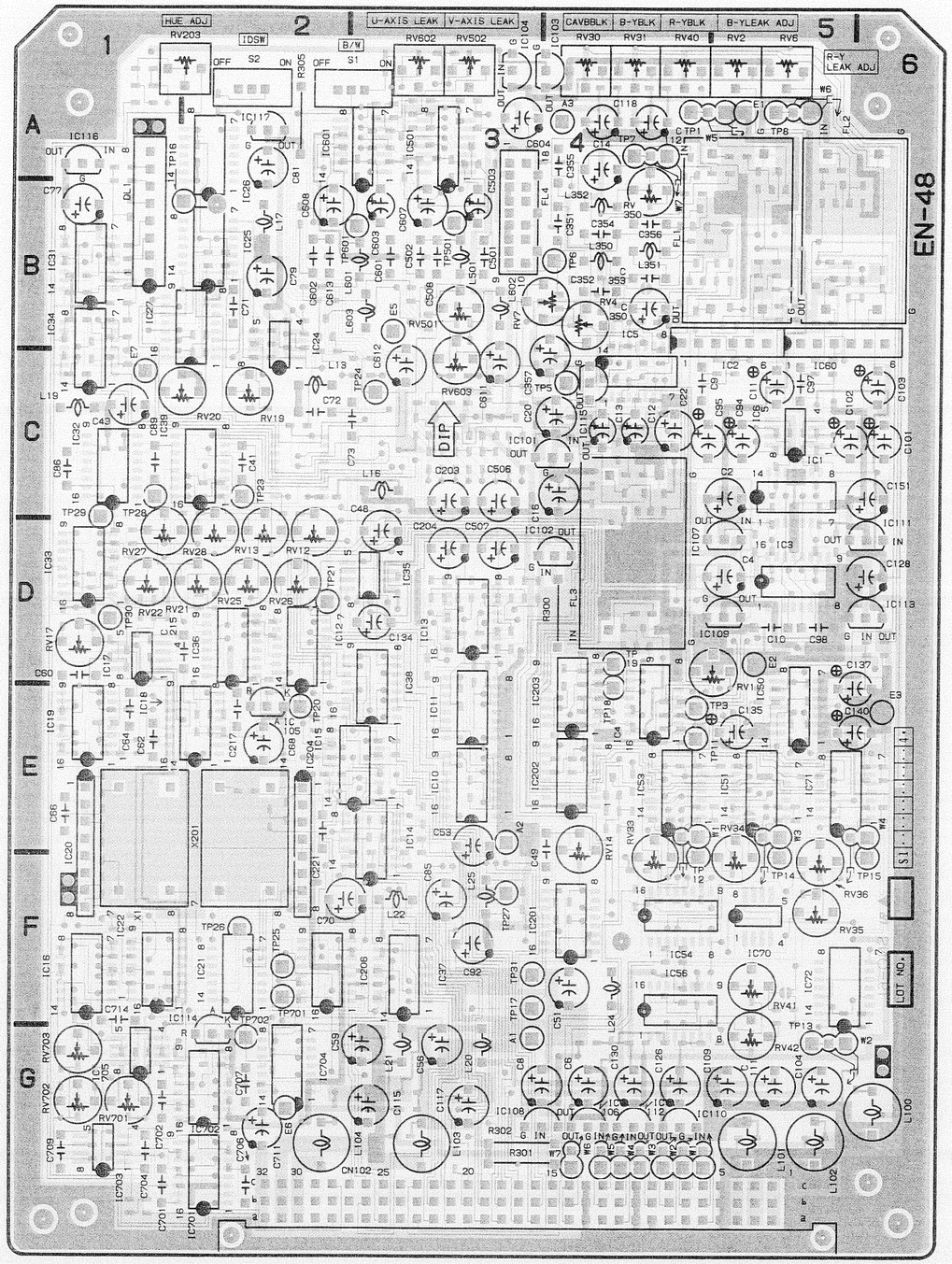
BVW-65P BVW-75P

BVW-95P BVW-96P

EN-48P; C ENCODER

S/N 10061 and higher

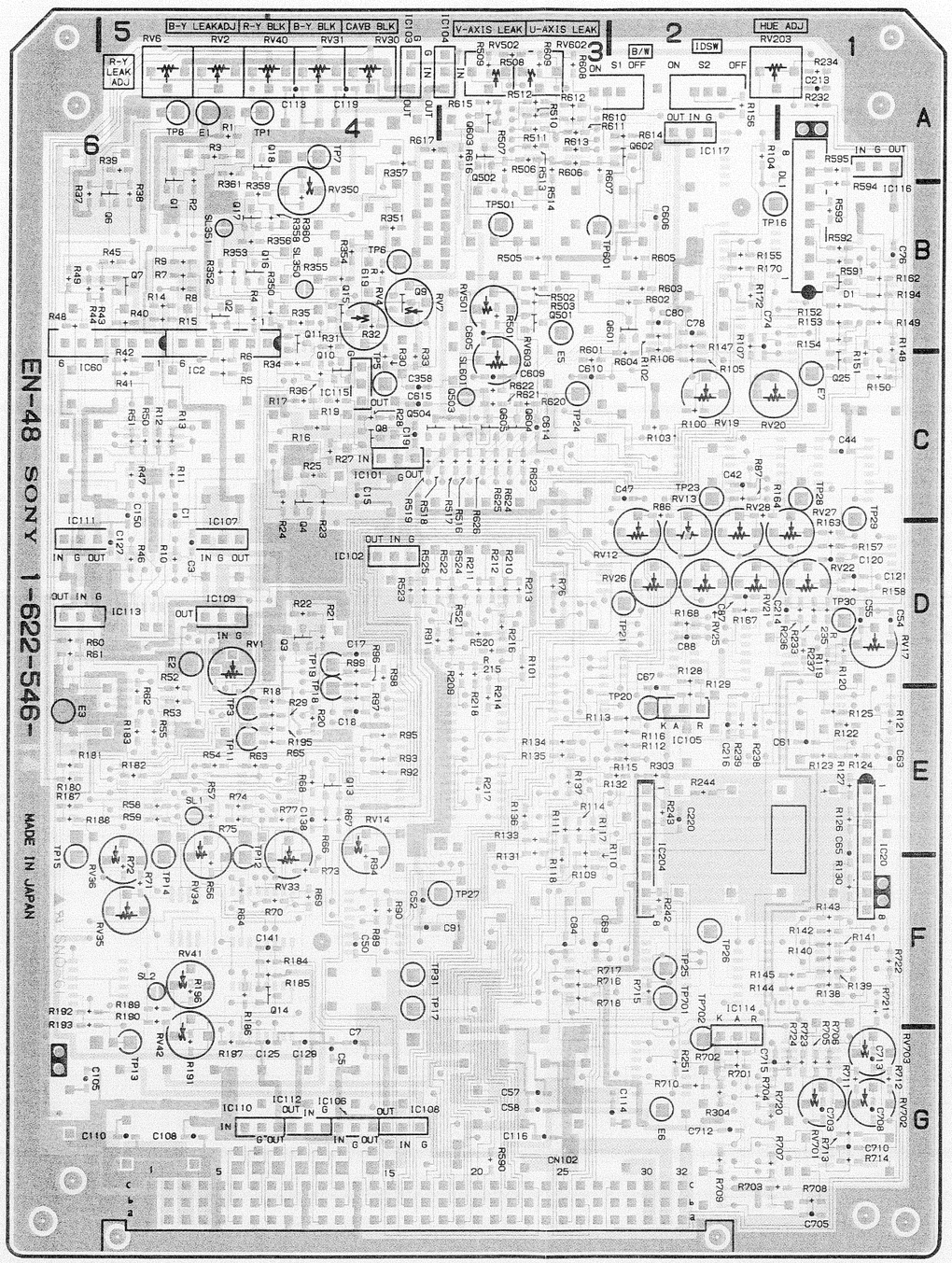
RV602	A-3
RV603	C-3
RV701	G-1
RV702	G-1
RV703	G-1
S1	A-3
S2	A-2
SL1	F-5
SL2	E-6
SL350	C-4
SL351	C-4
SL601	C-3
TP1	A-5
TP3	D-5
TP5	B-5
TP6	B-4
TP7	A-4
TP8	A-5
TP11	B-5
TP12	F-5
TP13	F-5
TP14	F-5
TP15	E-6
TP16	A-2
TP17	F-4
TP18	D-4
TP19	D-4
TP20	D-2
TP21	D-2
TP23	C-2
TP24	C-3
TP25	F-2
TP26	F-2
TP27	F-4
TP28	C-1
TP29	C-1
TP30	D-1
TP31	F-4
TP501	B-3
TP601	B-3
TP701	F-2
TP702	F-2
X1	B-1
X201	B-2



EN-48P —COMPONENT SIDE—

1-622-546-14,15

BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P



EN-48P —SOLDERING SIDE—

1-622-546-14,15

BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

VO-18P/18AP (1-622-547-13)

REF.NO	TYPE	PIN NO.						
		+12V	+9V	+8V	+5V	GND	−5V	−12V
IC 1	MC34184M		4					11
IC 3	TL610CPS	8				1.4		7
IC 4	CX20158				12	5.7.10		
IC 5	CX20158				12	5.7.10		
IC 6	CX20158				12	5.7.10		
IC 7	TC74HC00F				14	7		
IC 8	SN74LS06NS				14	7		
IC 9	TC74HC08F				14	7		
IC 10	TC74HC04F				14	7		
IC 11	CX20158		14			5.7.10.12	1	
IC 12	CX20158				12	5.7.10		
IC 13	CX20158				14	5.7.10.12		
IC 15	TL082CPS	8						4
IC 16	TC4053BF				16	8		
IC 17	MC34182M				8		4	
IC 100	NJM78L05A	*	*	*	*	*	*	*
IC 101	NJM78L08A	*	*	*	*	*	*	*
IC 102	NJM79L05A	*	*	*	*	*	*	*
IC 103	NJM79L08A	*	*	*	*	*	*	*
IC 104	NJM78L05A	*	*	*	*	*	*	*
IC 105	NJM79L05A	*	*	*	*	*	*	*
IC 106	NJM78L05A	*	*	*	*	*	*	*
IC 107	NJM79L05A	*	*	*	*	*	*	*
IC 108	S-80230AG	*	*	*	*	*	*	*
IC 109	NJM78L08A	*	*	*	*	*	*	*
IC 110	NJM79L05A	*	*	*	*	*	*	*
IC 111	S-81230AG	*	*	*	*	*	*	*
IC 112	NJM78L05A	*	*	*	*	*	*	*
IC 113	NJM79L05A	*	*	*	*	*	*	*
IC 601	CX20111					1.11.13.17		
IC 602	CX20111					1.11.13.17		
IC 603	TC4030BF				14	7		
IC 604	NJM4558M				8		4	
IC 605	TC504013BF				14	7		
IC 606	TC4538BF				16	8		
IC 700	MB4002PF	8					4	
IC 701	SN74LS00NS				14	7		
IC 702	BX381	2				6		9
IC 703	MC34182M	8						4
IC 704	μPC393G2				8		4	
IC 705	TC74HC123F				16	8		
IC 706	TC610CPS	8				1.4		5
IC 707	CX20158		4		12	5.7.10	1	
IC 708	SN74LS04NS				14	7		

* REFER TO SCHEMATIC

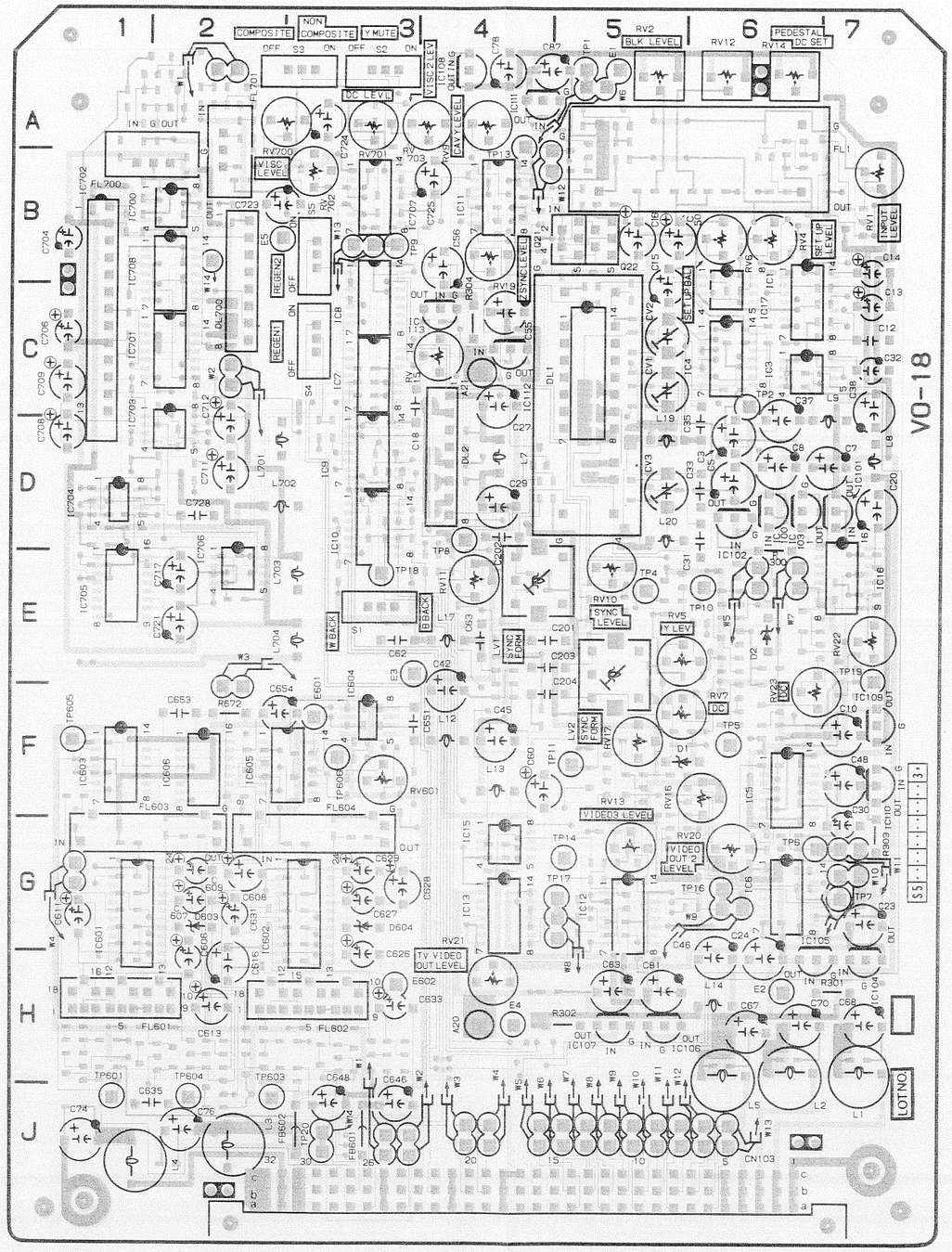
	VO-18P	VO-18AP
BVW-60P		○
BVW-65P		○
BVW-70P	○	
BVW-75P	○	
BVW-95P		○
BVW-96P	○	

VO-18P/18AP (1-622-547-13)

CV1	C-5	IC704	D-1	RV23	F-6
CV2	C-5	IC705	E-1	RV601	F-3
CV3	D-5	IC706	B-2		
		IC707	B-3	RV700	A-3
CN103	J-4	IC708	B-2	RV701	A-3
				RV702	B-3
D1	F-6	LV1	E-4	RV703	A-4
D2	E-6	LV2	F-5		
D601	H-1			S1	E-3
D602	H-3	Q1	A-5	S2	A-3
D603	G-2	Q2	B-6	S3	A-3
D604	G-3	Q3	B-6	S4	C-3
D605	F-3	Q4	A-7	S5	B-3
		Q5	B-7		
DL1	C-5	Q7	E-5	SL1	D-5
DL2	D-4	Q8	E-6	SL2	C-5
DL700	C-2	Q9	E-6	SL3	C-5
		Q10	F-6	SL4	D-5
E1	A-5	Q11	F-5	SL10	D-5
E2	H-6	Q12	F-6	SL11	D-5
E3	E-3	Q13	C-5	SL12	D-5
E4	H-4	Q14	E-6	SL20	C-4
E5	B-2	Q15	E-5	SL21	D-4
E601	F-3	Q16	F-5	SL22	D-4
E602	H-3	Q17	F-5	SL23	D-4
		Q18	F-5	SL700	C-2
FL1	B-6	Q19	G-5	SL701	C-2
FL601	H-1	Q20	F-5		
FL602	H-3	Q21	B-4	TP1	A-5
FL603	G-2	Q22	B-5	TP2	C-6
FL604	G-3	Q25	D-5	TP4	E-5
FL700	B-1	Q26	B-4	TP5	F-6
FL701	B-2	Q27	G-5	TP6	G-6
		Q28	G-5	TP7	G-7
IC1	C-6	Q31	E-4	TP8	D-4
IC3	C-6	Q32	D-4	TP9	B-3
IC4	C-5	Q35	E-7	TP10	B-6
IC5	F-6	Q36	E-7	TP11	F-5
IC6	G-6	Q37	E-7	TP13	A-4
IC7	C-3	Q38	F-6	TP14	G-5
IC8	C-3	Q39	E-7	TP16	G-6
IC9	D-3	Q40	D-3	TP17	G-5
IC10	D-3	Q401	B-4	TP18	E-3
IC11	B-4	Q601	H-2	TP19	E-7
IC12	G-5	Q602	J-2	TP20	J-3
IC13	G-4	Q603	H-3	TP601	J-1
IC15	G-4	Q604	H-1	TP603	J-2
IC16	E-7	Q605	H-2	TP604	J-2
IC17	C-6	Q606	F-2	TP605	F-1
IC100	D-6	Q700	A-2	TP606	F-3
IC101	D-7	Q701	A-2		
IC102	D-6	Q702	A-2		
IC103	D-6	Q703	B-3		
IC104	H-7				
IC105	H-6	RV1	B-7		
IC106	H-5	RV2	A-5		
IC107	H-5	RV4	B-6		
IC108	A-4	RV5	B-5		
IC109	F-7	RV6	B-6		
IC110	F-7	RV7	F-6		
IC111	A-4	RV9	A-4		
IC112	C-4	RV10	B-5		
IC113	C-4	RV11	E-4		
IC601	G-1	RV12	A-6		
IC602	G-3	RV13	G-5		
IC603	F-1	RV14	A-6		
IC604	F-3	RV15	C-4		
IC605	F-3	RV16	F-6		
IC606	F-2	RV17	F-5		
IC700	B-2	RV19	B-4		
IC701	C-2	RV20	G-6		
IC702	C-1	RV21	H-4		
IC703	D-2	RV22	E-7		

VO-18P/18AP; VIDEO OUTPUT

S/N 10001 through 10060



VO-18P/18AP — COMPONENT SIDE —

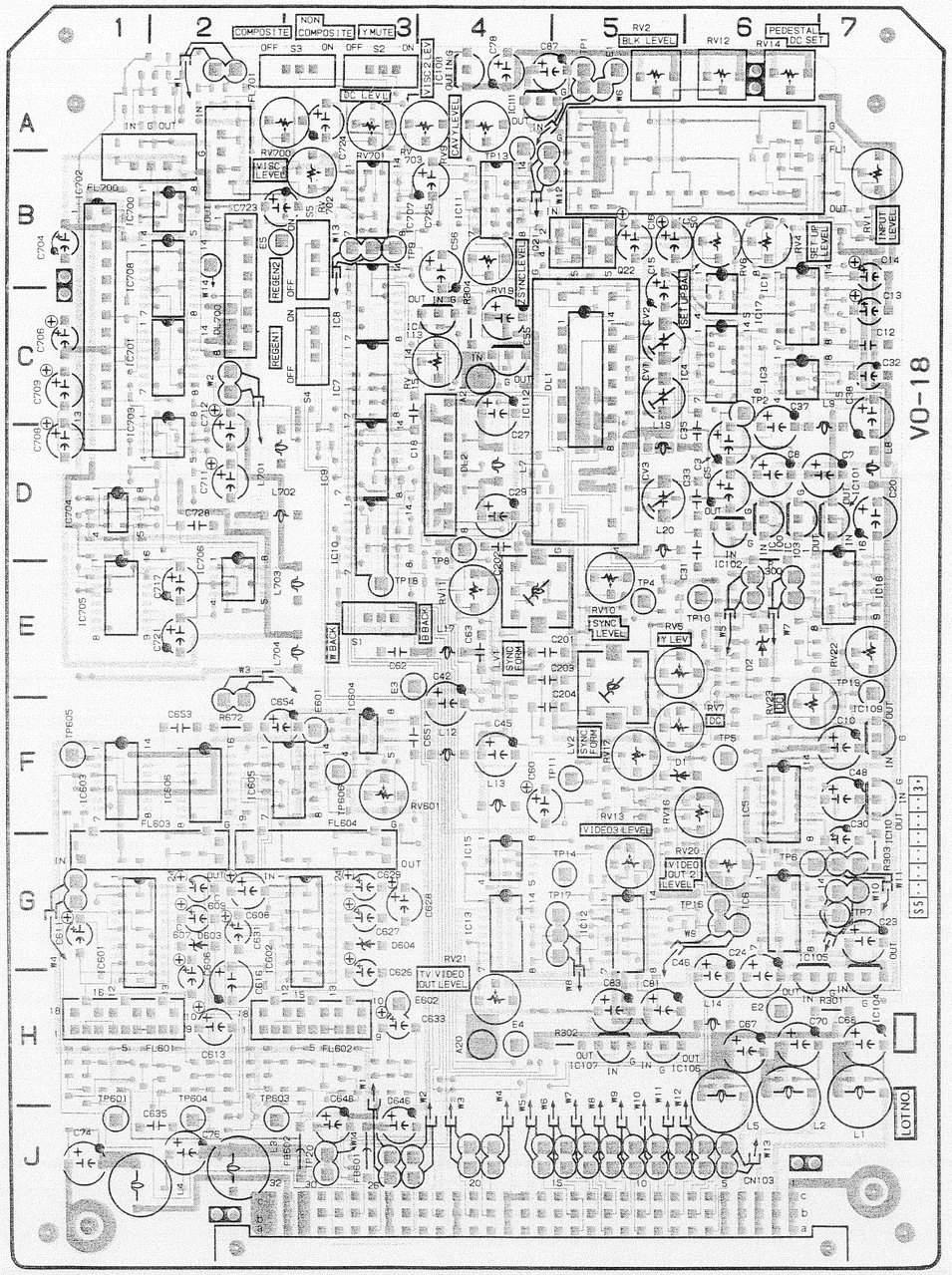
1-622-547-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

VO-18 1-622-547-13 SONY MADE IN JAPAN

VO-18P/18AP

VO-18P/18AP; VIDEO OUTPUT

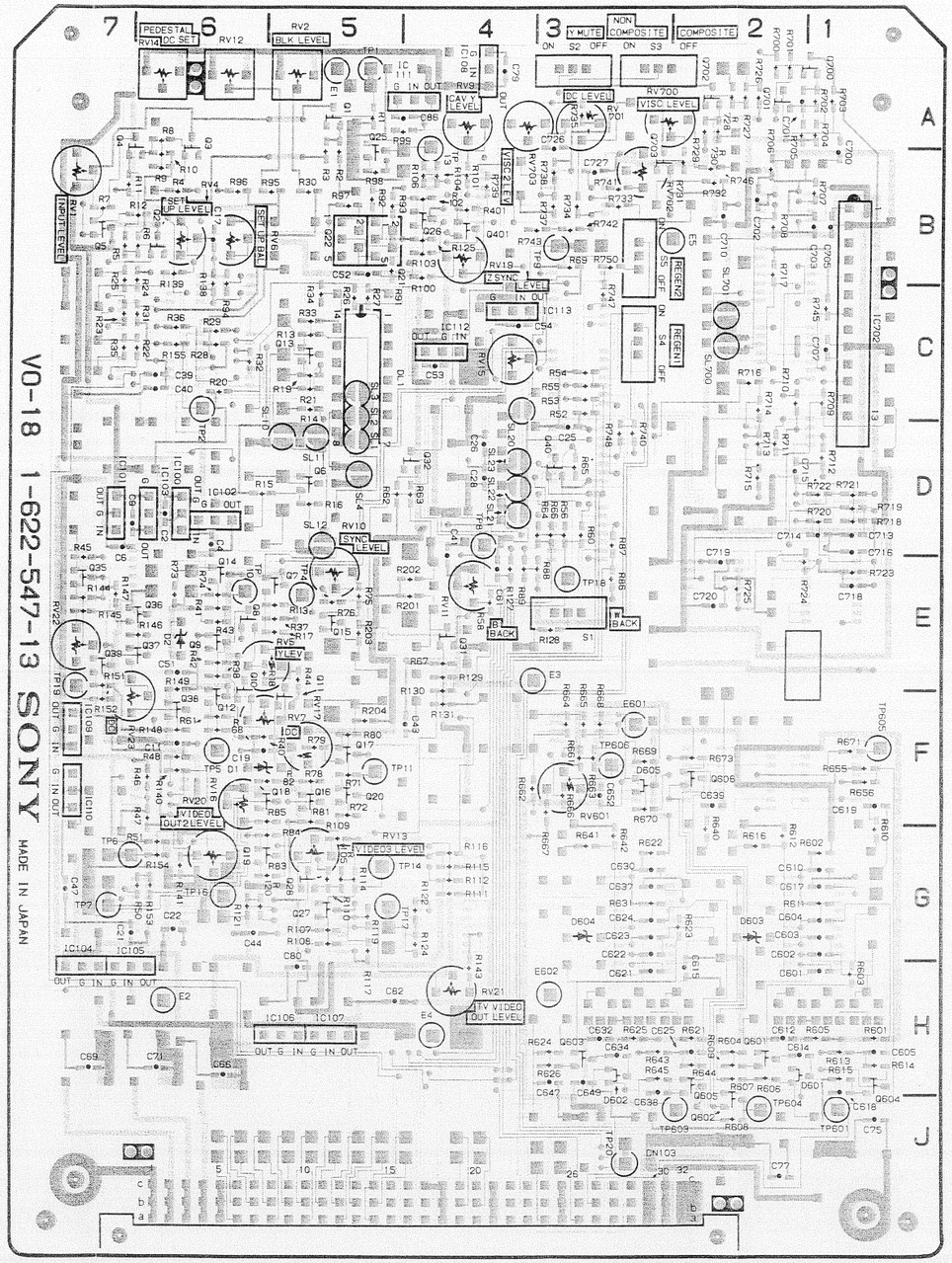
S/N 10001 through 10060



VO-18P/18AP — COMPONENT SIDE —

1-622-547-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

17-42 (a)



VO-18P/18AP — SOLDERING SIDE —

1-622-547-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

17-43 (a)

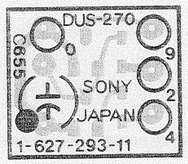
VO-18AP (1-622-547-21, 22, 23)

REF.NO.	TYPE	PIN NO.						
		+12V	+9V	+8V	+5V	GND	−5V	−12V
IC 1	MC34184M		4					11
IC 3	TL610CPS	8				1.4		7
IC 4	CX20158				12	5.7.10		
IC 5	CX20158				12	5.7.10		
IC 6	CX20158				12	5.7.10		
IC 7	TC74HC00F				14	7		
IC 8	SN74LS06NS				14	7		
IC 9	TC74HC08F				14	7		
IC 10	TC74HC04F				14	7		
IC 11	CX20158		14			5.7.10.12	1	
IC 12	CX20158				12	5.7.10		
IC 13	CX20158				14	5.7.10.12		
IC 15	TL082CPS	8						4
IC 16	TC4053BF				16	8		
IC 17	MC34182M				8		4	
IC 100	NJM78L05A	*	*	*	*	*	*	*
IC 101	NJM78L08A	*	*	*	*	*	*	*
IC 102	NJM79L05A	*	*	*	*	*	*	*
IC 103	NJM79L08A	*	*	*	*	*	*	*
IC 104	NJM78L05A	*	*	*	*	*	*	*
IC 105	NJM79L05A	*	*	*	*	*	*	*
IC 106	NJM78L05A	*	*	*	*	*	*	*
IC 107	NJM79L05A	*	*	*	*	*	*	*
IC 108	S-80230AG	*	*	*	*	*	*	*
IC 109	NJM78L08A	*	*	*	*	*	*	*
IC 110	NJM79L05A	*	*	*	*	*	*	*
IC 111	S-81230AG	*	*	*	*	*	*	*
IC 112	NJM78L05A	*	*	*	*	*	*	*
IC 113	NJM79L05A	*	*	*	*	*	*	*
IC 601	CX20111					1.11.13.17		
IC 602	CX20111					1.11.13.17		
IC 603	TC4030BF				14	7		
IC 604	NJM4558M				8		4	
IC 605	TC50403BF				14	7		
IC 606	TC4538BF				16	8		
IC 700	MB4002PF	8					4	
IC 701	SN74LS00NS				14	7		
IC 702	BX-381	2				6		9
IC 703	MC34182M	8						4
IC 704	μPC393G2				8		4	
IC 705	TC74HC123F				16	8		
IC 706	TC610CPS	8				1.4		5
IC 707	CX20158		4		12	5.7.10	1	
IC 708	SN74LS04NS				14	7		

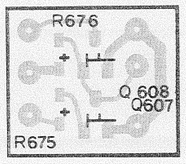
* REFER TO SCHEMATIC

VO-18AP (1-622-547-21, 22, 23)

CN103	J-4	IC706	E-2	RV16	F-6
		IC707	B-3	RV17	F-5
CV1	C-5	IC708	B-2	RV19	B-4
				RV20	G-6
D1	F-6	LV1	E-4	RV21	H-4
D601	H-1	LV2	F-5	RV501	C-5
D602	H-3			RV601	F-3
D603	G-2	Q1	A-5	RV700	A-3
D604	G-3	Q2	B-6	RV701	A-3
D605	F-3	Q3	B-6	RV702	C-3
		Q4	A-7	RV703	B-3
DL1	C-5	Q5	B-7	RV704	B-3
DL2	D-4	Q6	C-5		
DL700	C-2	Q7	E-5	S1	E-3
		Q8	E-6	S2	A-3
E1	A-5	Q9	E-6	S3	A-3
E2	H-6	Q10	F-6	S4	C-3
E3	E-3	Q11	F-5	S5	B-3
E4	H-4	Q12	F-6		
E5	B-2	Q13	C-5	SL1	D-5
E601	F-3	Q14	E-6	SL2	C-5
E602	H-3	Q15	E-5	SL3	C-5
		Q16	F-5	SL700	C-2
FL1	B-6	Q17	F-5	SL701	C-2
FL601	H-1	Q18	F-5		
FL602	H-3	Q19	G-5	TP1	A-5
FL603	G-2	Q20	F-5	TP2	C-6
FL604	G-3	Q21	B-4	TP4	E-5
FL700	B-1	Q22	B-5	TP5	F-6
FL701	B-2	Q25	D-5	TP6	G-6
		Q26	B-4	TP7	G-7
IC1	C-6	Q27	G-5	TP8	D-4
IC3	C-6	Q28	G-5	TP9	B-3
IC4	C-5	Q29	G-4	TP10	E-6
IC5	F-6	Q30	F-4	TP11	F-5
IC6	G-6	Q31	E-4	TP13	A-4
IC7	C-3	Q32	D-4	TP14	G-5
IC8	C-3	Q35	B-7	TP16	G-6
IC9	D-3	Q36	E-7	TP17	G-5
IC10	D-3	Q37	E-7	TP18	E-3
IC11	B-4	Q38	F-6	TP20	J-3
IC12	G-5	Q39	E-7	TP601	J-1
IC13	G-4	Q40	D-3	TP603	J-2
IC14	B-4	Q401	B-4	TP604	J-2
IC15	G-4	Q501	C-5	TP605	F-1
IC16	E-7	Q502	C-5	TP606	F-3
IC17	C-6	Q503	C-5		
IC100	D-6	Q504	C-5		
IC101	D-7	Q601	H-2		
IC102	D-6	Q602	J-2		
IC103	D-6	Q603	H-3		
IC104	H-7	Q604	H-1		
IC105	H-6	Q605	H-2		
IC106	H-5	Q606	F-2		
IC107	H-5	Q700	A-2		
IC108	A-4	Q701	A-2		
IC109	F-7	Q702	A-2		
IC110	F-7	Q703	B-3		
IC111	A-4	Q704	C-3		
IC112	C-4				
IC113	C-4	RV1	B-7		
IC601	G-1	RV2	A-5		
IC602	G-3	RV4	B-6		
IC603	F-1	RV5	E-5		
IC604	F-3	RV6	B-6		
IC605	F-3	RV7	F-6		
IC606	F-2	RV9	A-4		
IC700	B-2	RV10	E-5		
IC701	C-2	RV11	E-4		
IC702	C-1	RV12	A-6		
IC703	D-2	RV13	G-5		
IC704	D-1	RV14	A-6		
IC705	E-1	RV15	C-4		



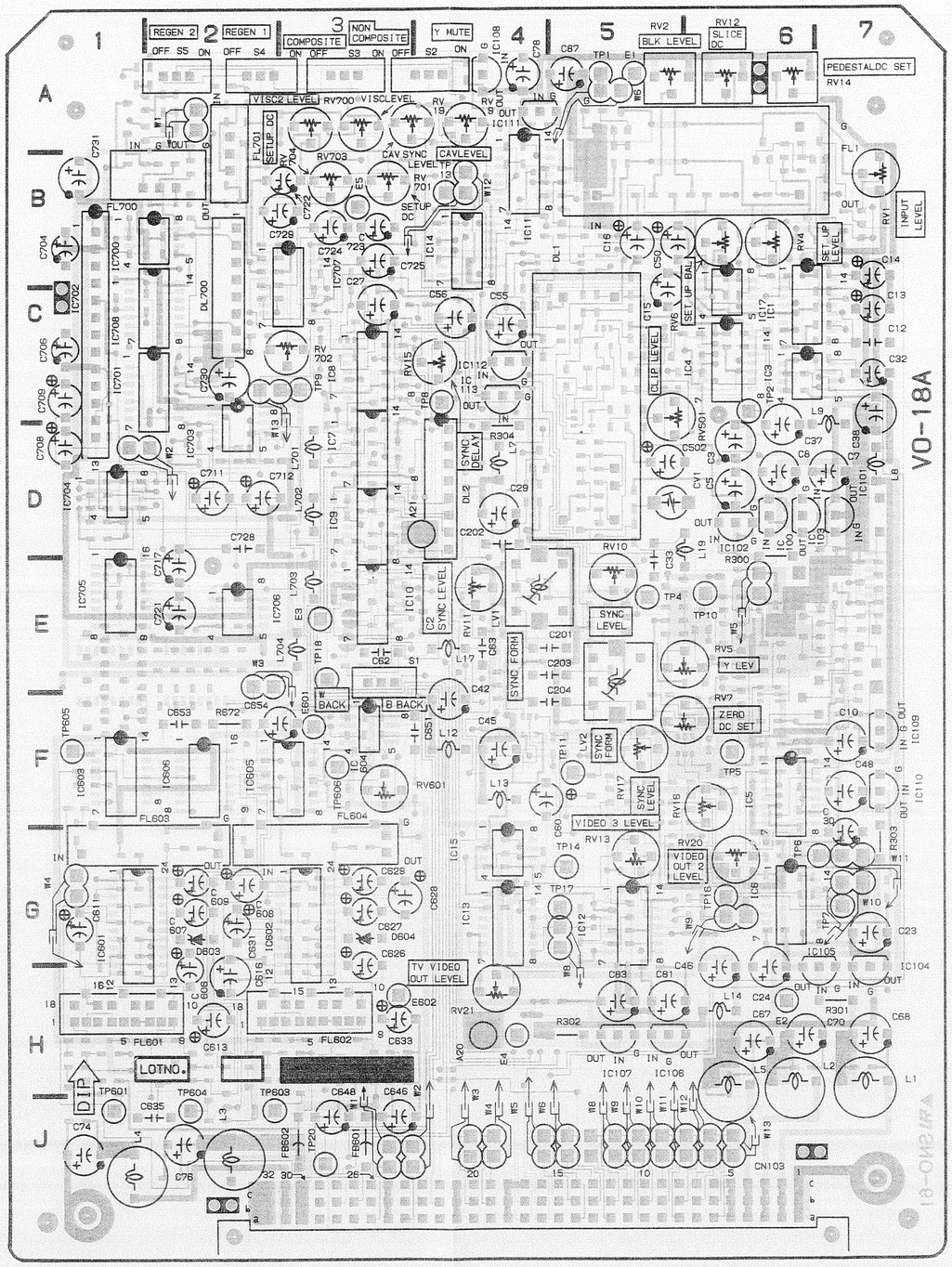
DUS-270 — COMPONENT SIDE —
1-627-293-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



DUS-270 — SOLDERING SIDE —
1-627-293-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

VO-18AP ; VIDEO OUTPUT
DUS-270 ; SQUELCH BUFFER

S/N 10061 and higher



VO-18AP —COMPONENT SIDE—
1-622-547-21, 22, 23
BVW-60P
BVW-65P
BVW-95P

VO-18AP; VIDEO OUTPUT
DUS-270; SQUELCH BUFFER

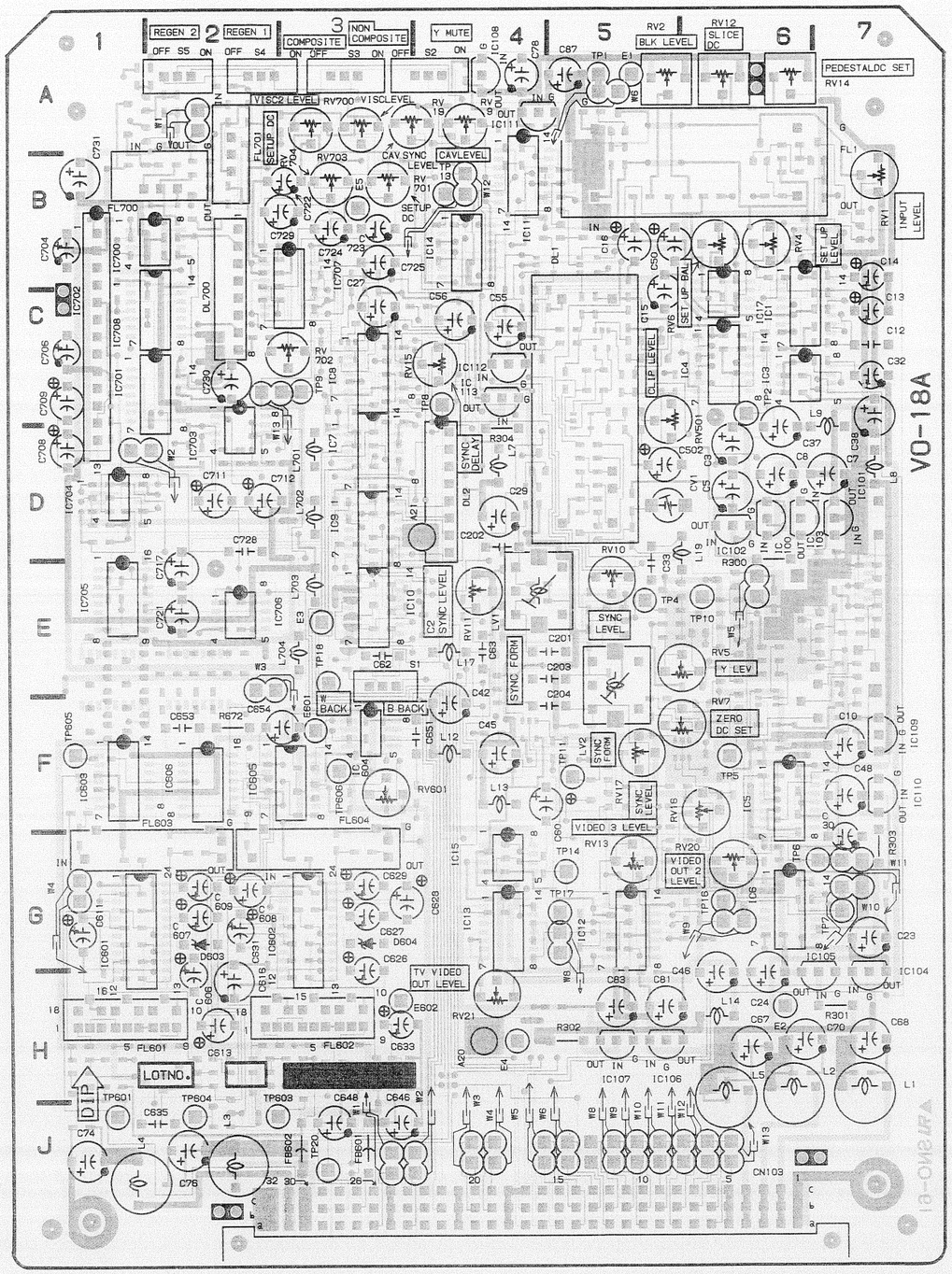
S/N 10061 and higher

RV16 F-6
RV17 F-5
RV19 B-4
RV20 G-6
RV21 H-4
RV501 C-5
RV601 F-3
RV700 A-3
RV701 A-3
RV702 C-3
RV703 B-3
RV704 B-3

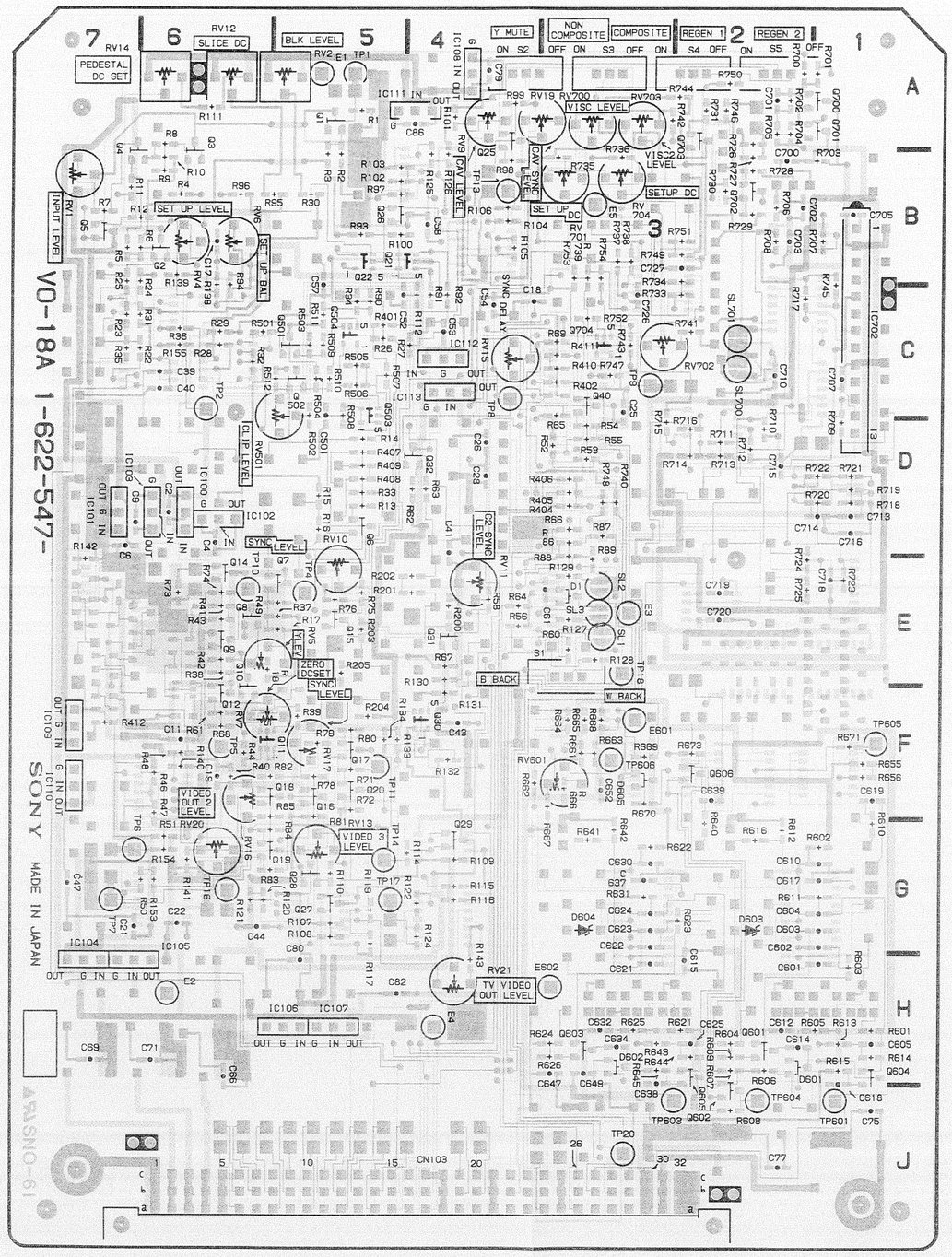
S1 E-3
S2 A-3
S3 A-3
S4 C-3
S5 B-3

SL1 D-5
SL2 C-5
SL3 C-5
SL700 C-2
SL701 C-2

TP1 A-5
TP2 C-6
TP4 E-5
TP5 F-6
TP6 G-6
TP7 G-7
TP8 D-4
TP9 B-3
TP10 B-6
TP11 F-5
TP13 A-4
TP14 G-5
TP16 G-6
TP17 G-5
TP18 B-3
TP20 J-3
TP601 J-1
TP603 J-2
TP604 J-2
TP605 F-1
TP606 F-3



VO-18AP —COMPONENT SIDE—
1-622-547-21, 22, 23
BVW-60P
BVW-65P
BVW-95P



VO-18AP —SOLDERING SIDE—
1-622-547-21, 22, 23
BVW-60P
BVW-65P
BVW-95P

DEC-39A; EDGE DETECTOR

S/N 10001 through 10622

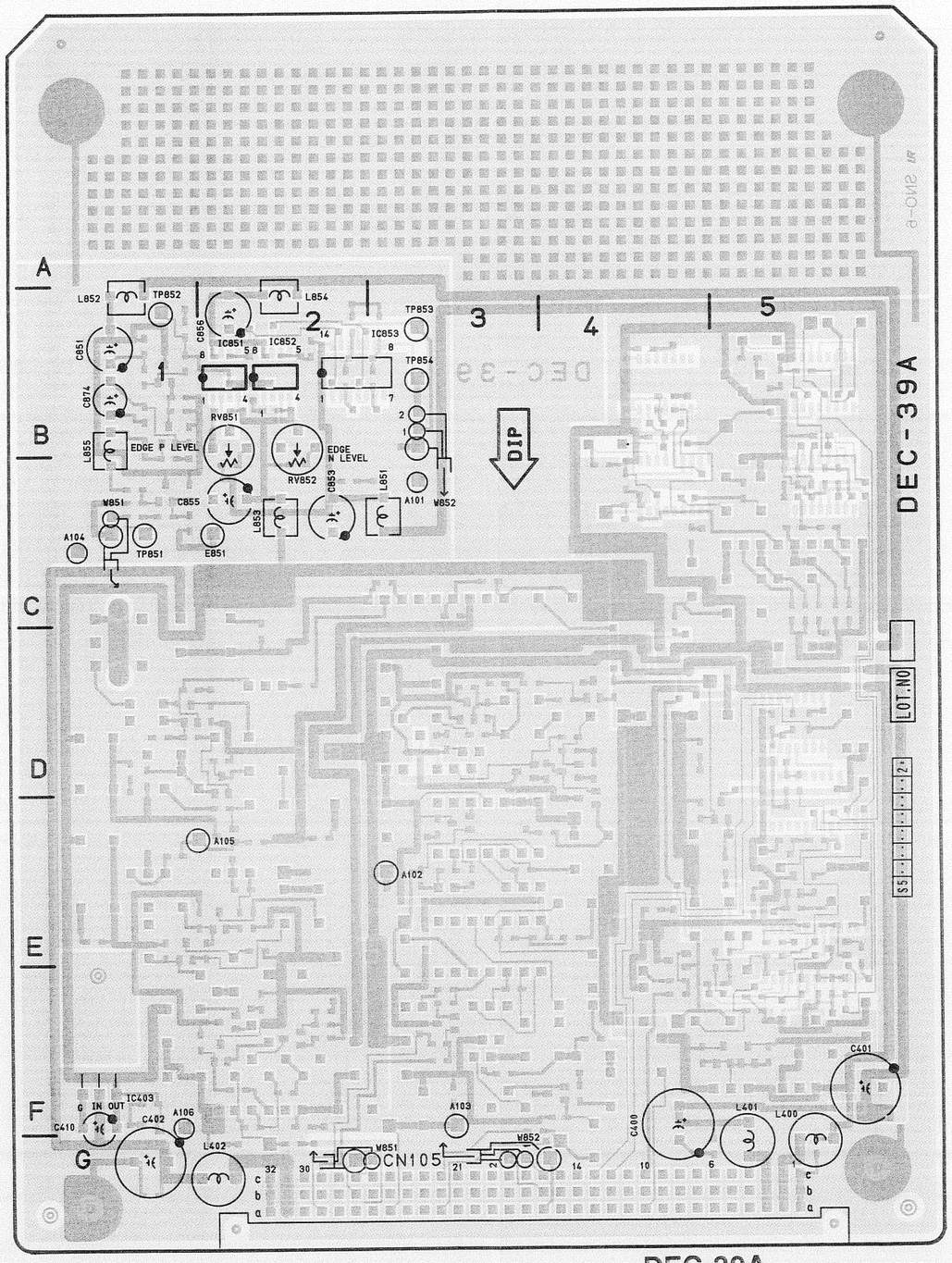
DEC-39A (1-623-874-21)

REF.NO	TYPE	PIN NO.					
		REG+12V	+9V	+5V	GND	−5V	REG−12V
IC 403	NJM79M05A	*	*	*	*	*	*
IC 851	MB4002PF	8			1	4	
IC 852	MB4002PF	8			1	4	
IC 853	SN74HC08NS			14	7		

* REFER TO SCHEMATIC

DEC-39A (1-623-874-21)

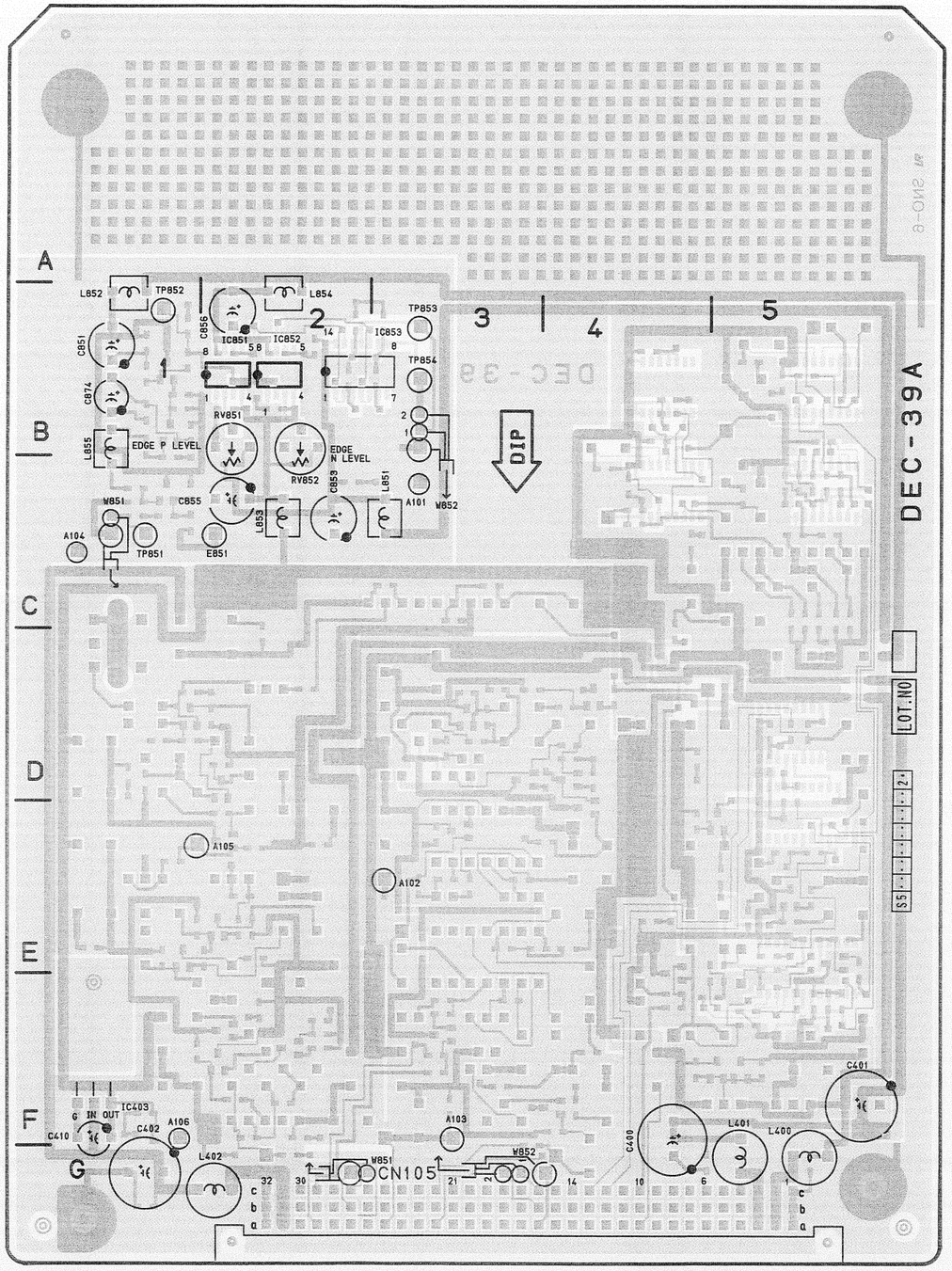
CN105	G-3
D403	F-1
E851	C-2
IC403	F-1
IC851	B-2
IC852	B-2
IC853	B-2
Q851	C-1
Q852	B-1
Q853	B-1
RV851	B-2
RV852	B-2
TP851	C-1
TP852	B-1
TP853	B-3
TP854	B-3



DEC-39A — COMPONENT SIDE —

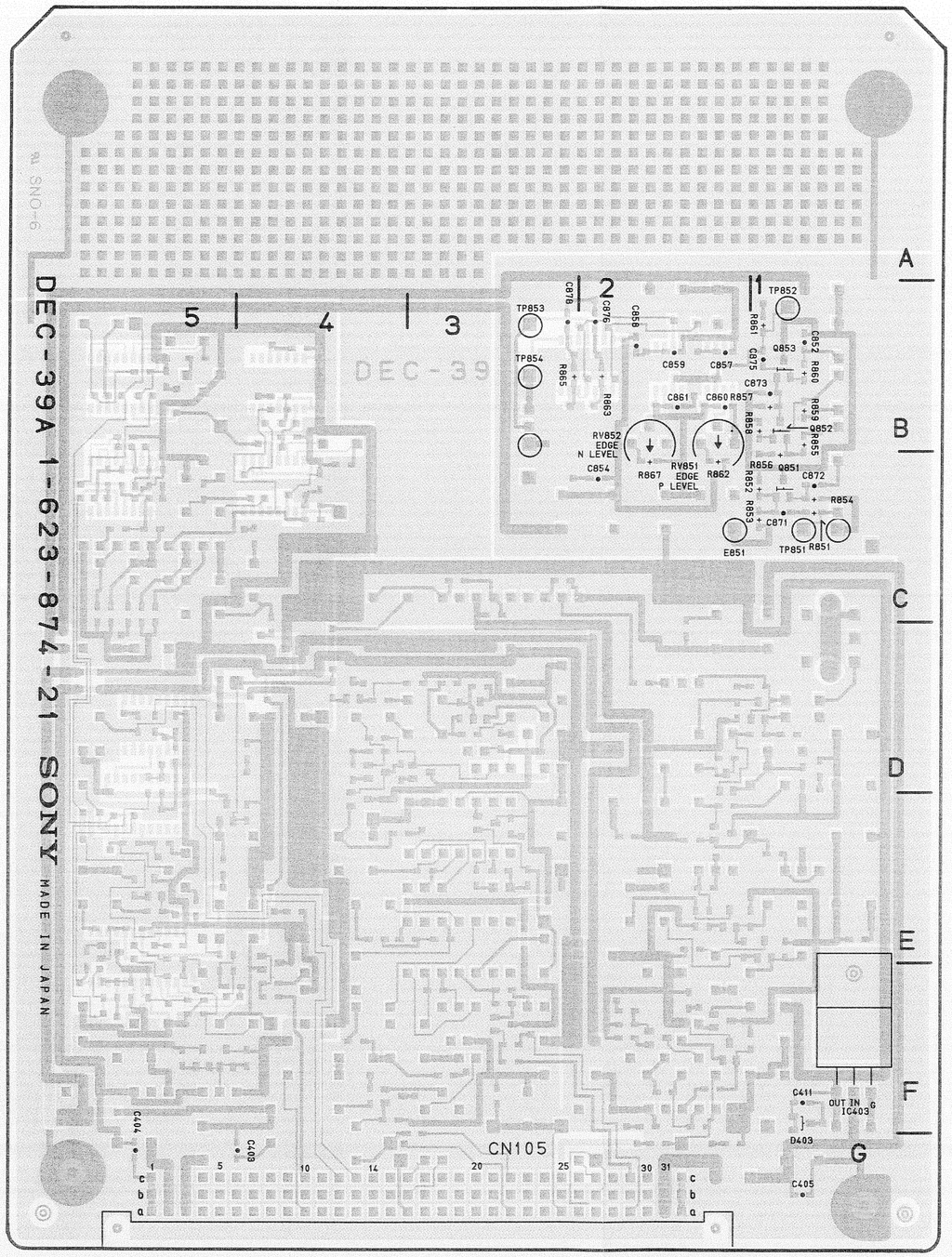
1-623-874-21
BVW-60P
BVW-65P
BVW-95P

DEC-39A; EDGE DETECTOR S/N 10001 through 10622



DEC-39A — COMPONENT SIDE —

1-623-874-21
BVW-60P
BVW-65P
BVW-95P



DEC-39A — SOLDERING SIDE —

1-623-874-21
BVW-60P
BVW-65P
BVW-95P

DEC-46AP; EDGE DETECTOR

S/N 10623 and higher

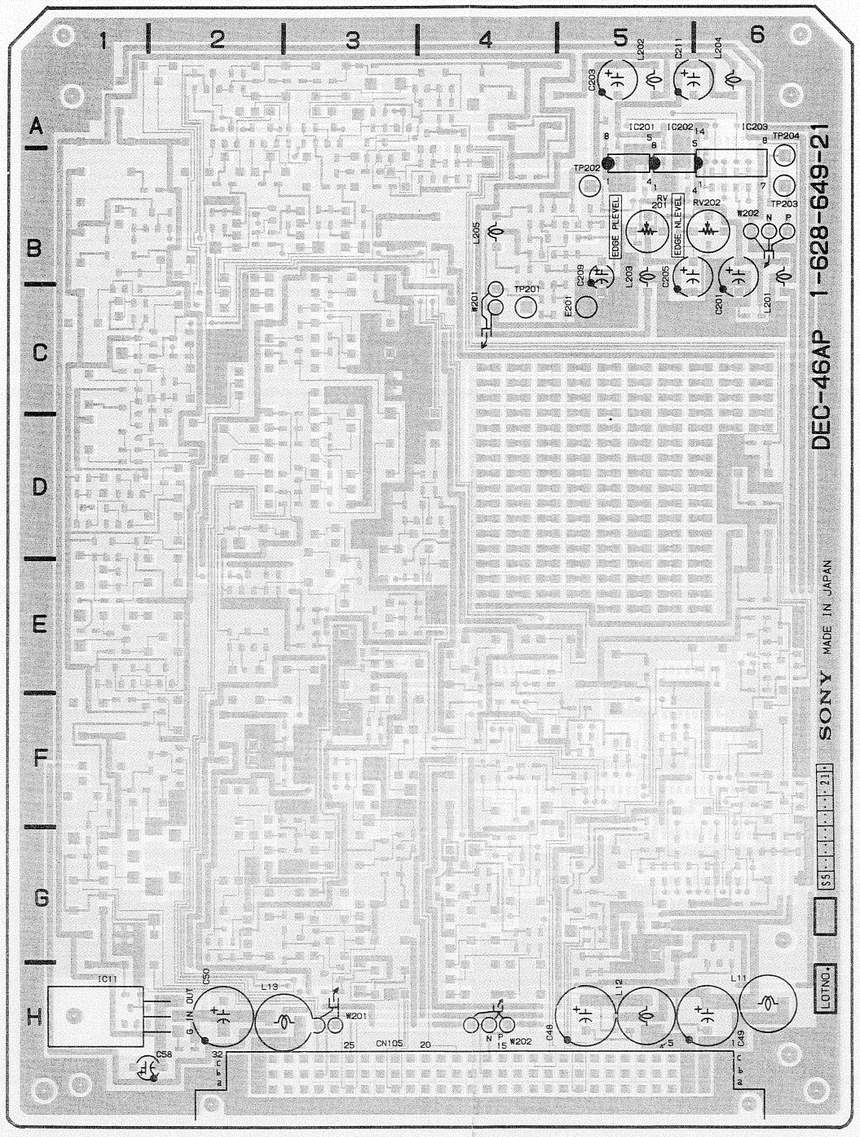
DEC-46AP(1-628-649-21)

REF.No.	TYPE	PIN NO.					
		REG +12V	+9V	+5V	GND	−5V	REG-12V
IC 11	RC78M05FA	*	*	*	*	*	*
IC 201	MB4002PF	8			1	4	
IC 202	MB4002PF	8			1	4	
IC 203	SN74HC08NS			14	7		

*REFER TO SCHEMATIC

DEC-46AP (1-628-649-21)

CN105	H-3
D4	H-1
E201	C-5
IC11	H-1
IC201	B-5
IC202	B-5
IC203	B-6
Q201	B-5
Q202	B-5
Q203	B-5
RV201	B-5
RV202	B-6
TP201	C-4
TP202	B-5
TP203	B-6
TP204	B-6



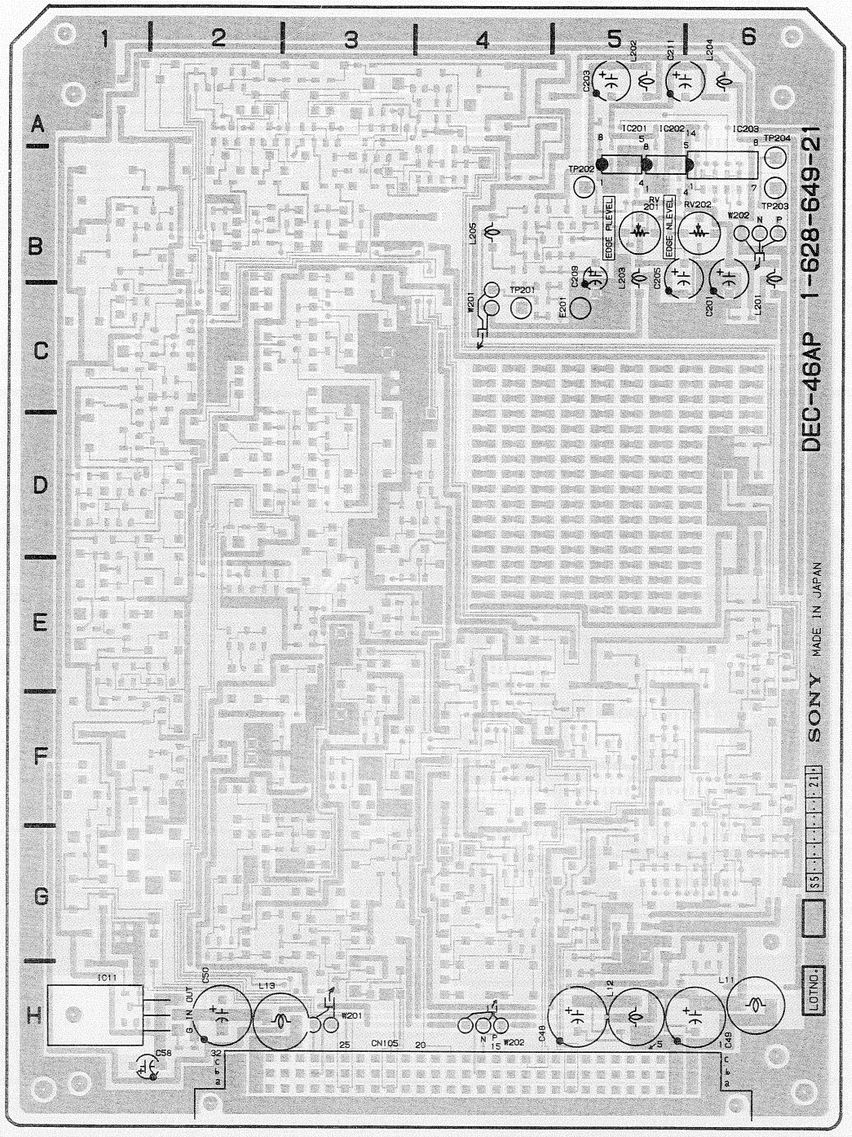
DEC-46AP — COMPONENT SIDE —

1-628-649-21
BVW-60P
BVW-65P
BVW-95P

DEC-46AP

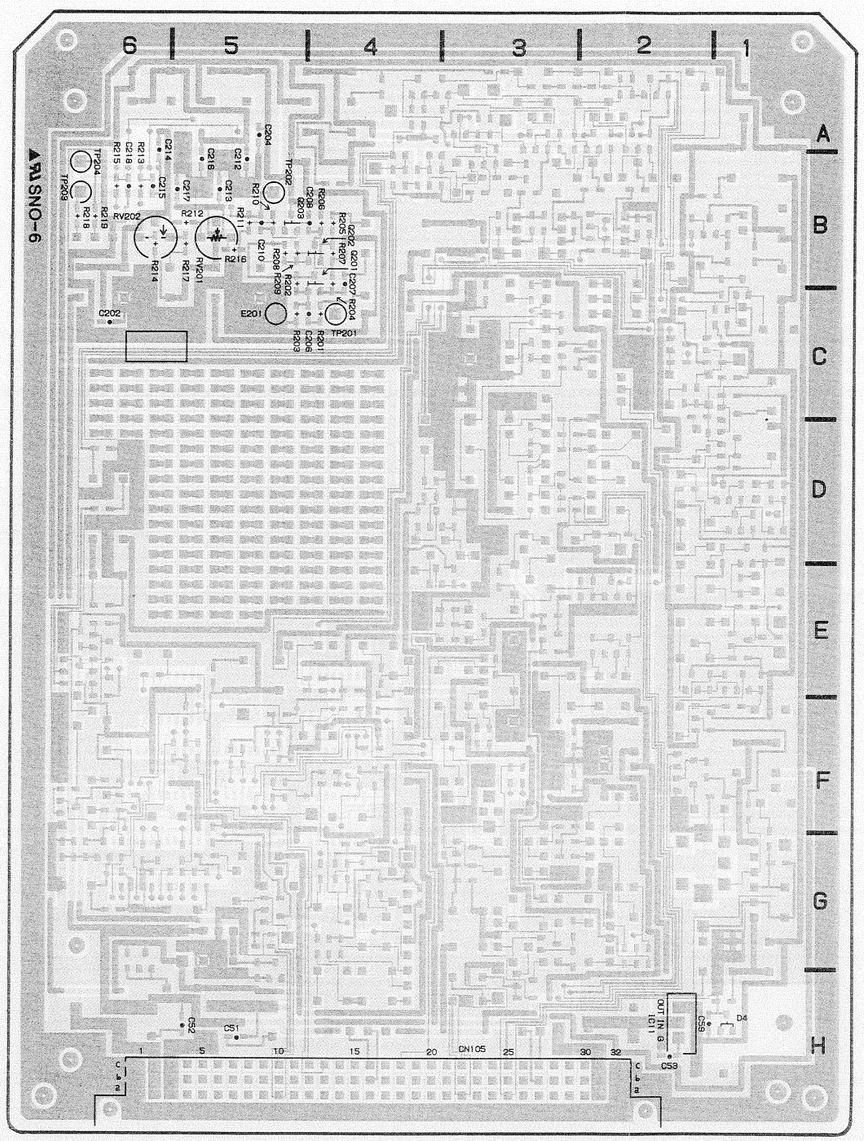
DEC-46AP; EDGE DETECTOR

S/N 10623 and higher



DEC-46AP — COMPONENT SIDE —

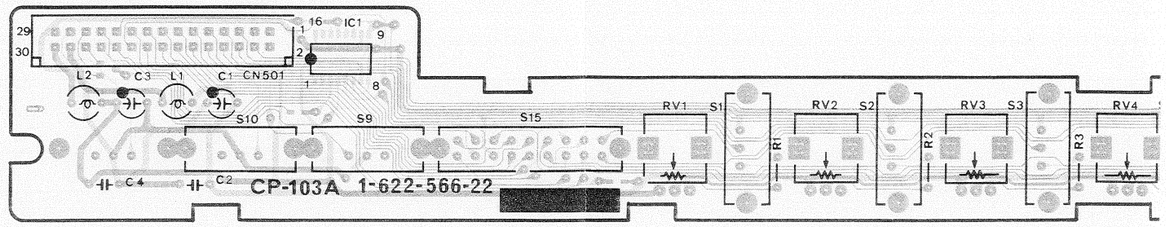
1-628-649-21
BVW-60P
BVW-65P
BVW-95P

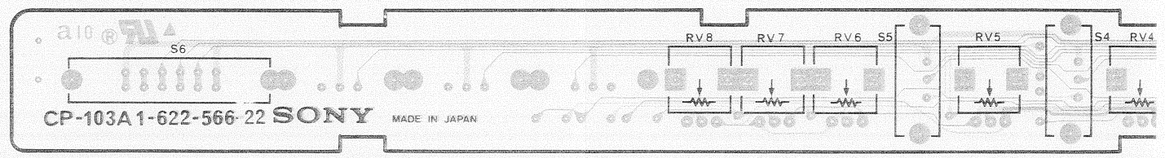


DEC-46AP — SOLDERING SIDE —

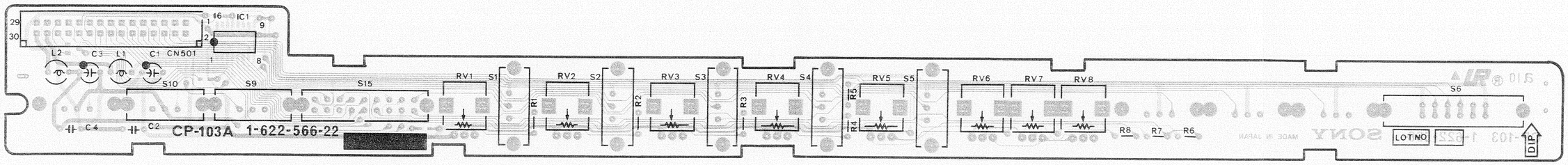
1-628-649-21
BVW-60P
BVW-65P
BVW-95P

CP-103AP; SUB CONTROL PANEL



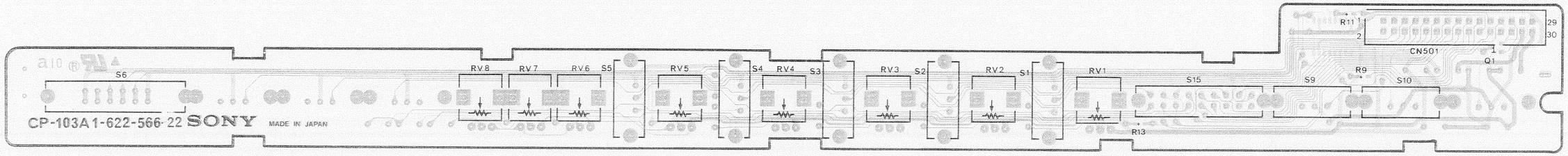


CP-103AP; SUB CONTROL PANEL



CP-103AP — COMPONENT SIDE —

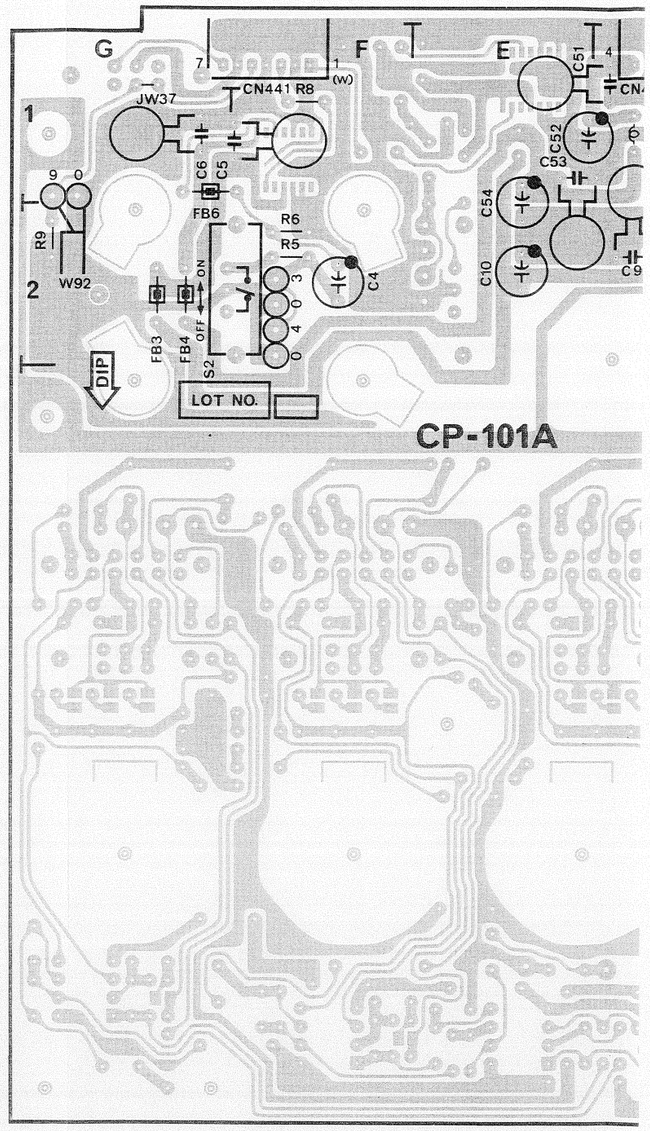
1-622-566-22
BVW-60P
BVW-65P
BVW-95P



CP-103AP — SOLDERING SIDE —

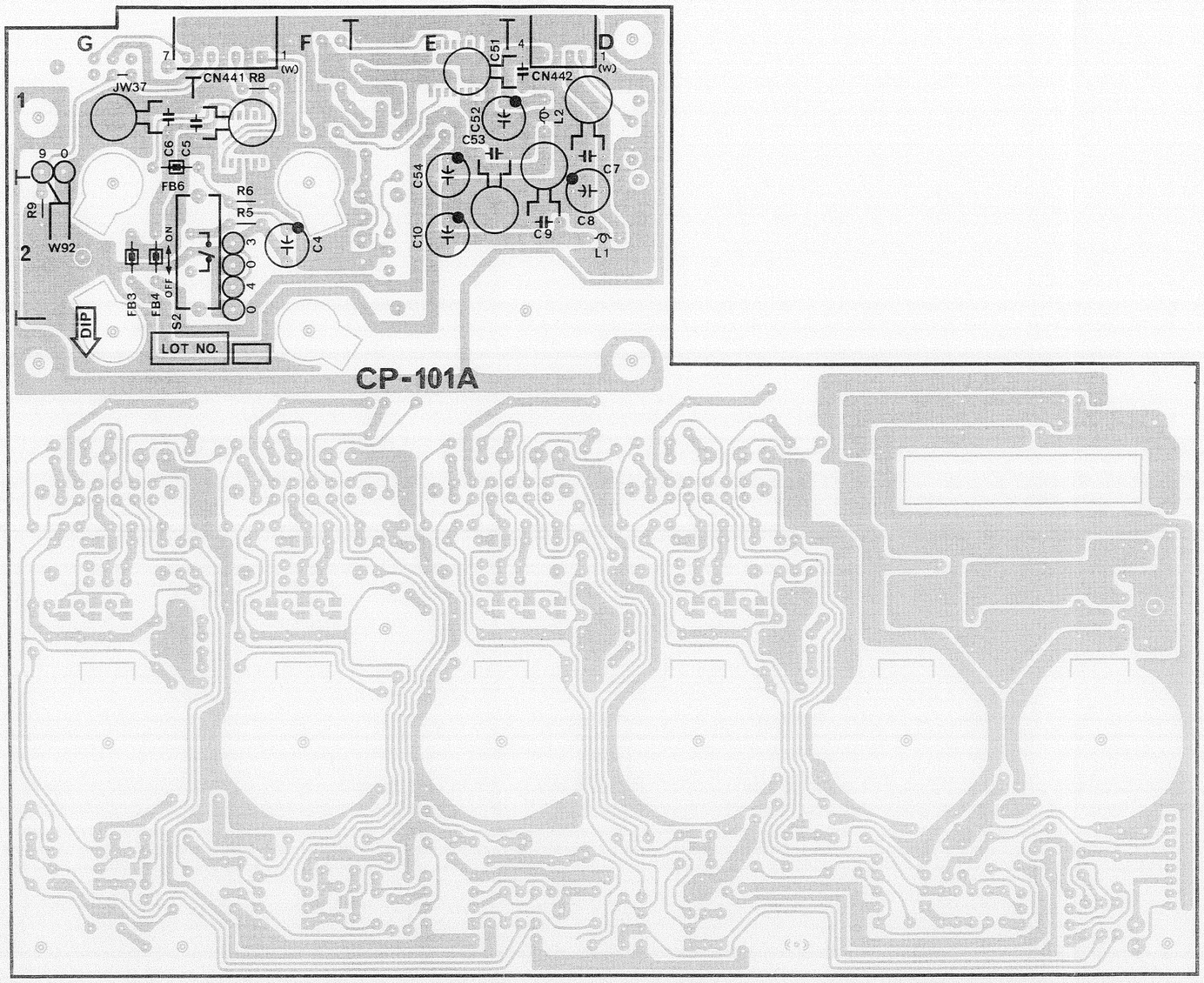
1-622-566-22
BVW-60P
BVW-65P
BVW-95P

CP-101AP; REF VIDEO INPUT



CP-101AP

CP-101AP; REF VIDEO INPUT



CP-101AP — COMPONENT SIDE —

1-622-570-21
BVW-60P
BVW-65P
BVW-95P

AU-118P (1-626-092-11)

REF.NO	TYPE	PIN NO.						
		+12V	+11V	+7V	GND	−7V	−11V	−12V
IC 1	NJM78L05A	*		*	2	*		*
IC 2	NJM79L05A	*		*	3	*		*
IC 101	μPC4558C		8				4	
IC 102	μPC4558C		8				4	
IC 103	BX1152			12	1.6.18	14		
IC 104	NJM5532M			8		4		
IC 105	μPC4558C		8				4	
IC 106	NJM2043M-D			8		4		
IC 201	μPC4558C		8				4	
IC 202	μPC4558C		8				4	
IC 203	BX1152			12	1.6.18	14		
IC 204	NJM5532M			8		4		
IC 205	μPC4558C		8				4	
IC 206	NJM2043M-D			8		4		

* REFER TO SCHEMATIC

AU-118P (1-626-092-11)

CN204 C-7

D1 C-1
D2 C-1
D303 C-6

E101 C-4
E102 A-1
E201 D-4
E202 E-1
E301 C-2

FL101 C-4

IC1 B-6
IC2 A-7
IC101 C-4
IC102 B-4
IC103 B-3
IC104 B-1
IC105 A-4
IC106 B-6
IC201 D-4
IC202 D-4
IC203 D-3
IC204 E-1
IC205 E-4
IC206 D-5

LV101 C-3
LV201 D-3

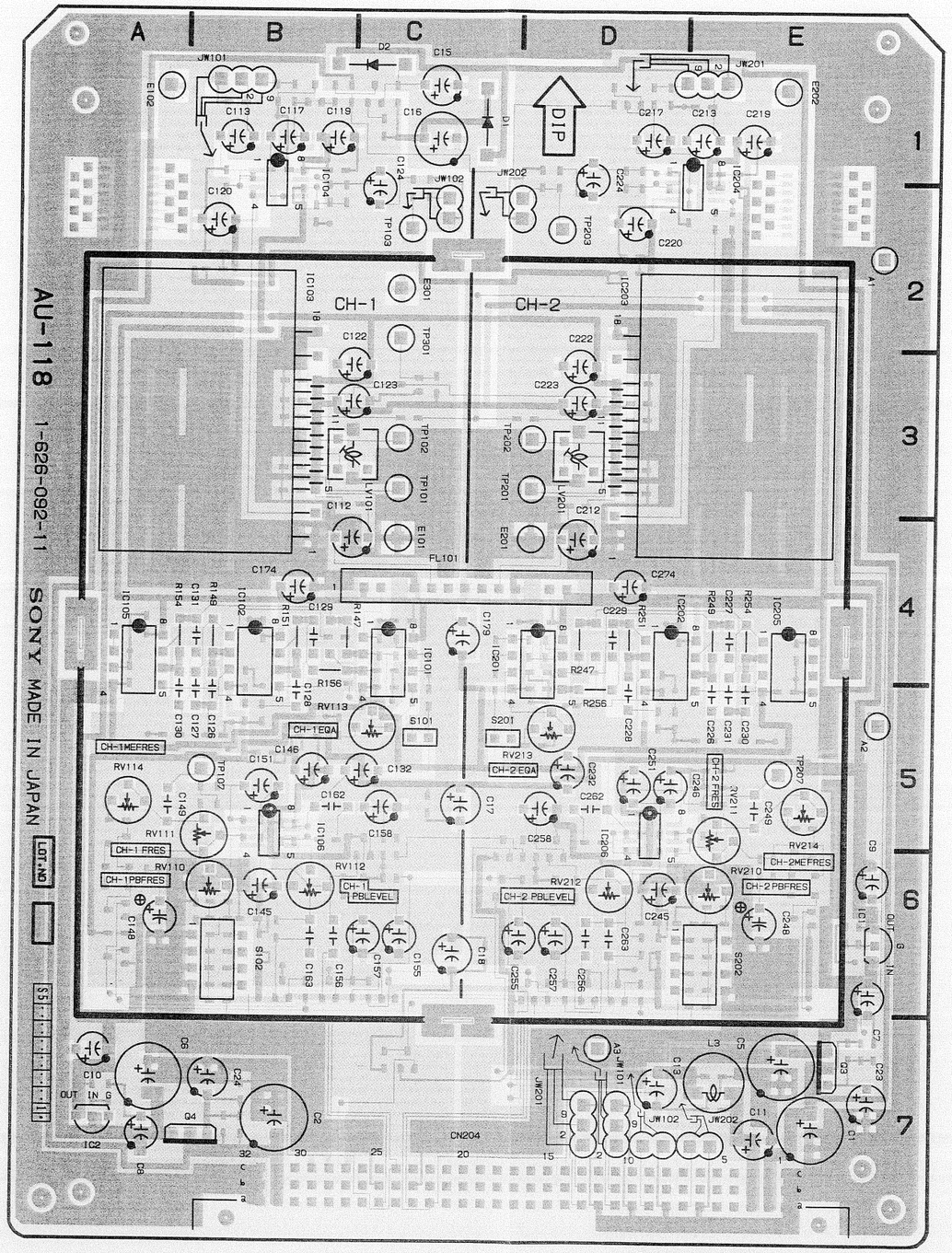
Q1 C-1
Q2 C-3
Q3 E-7
Q4 B-7
Q5 A-6
Q6 C-7
Q104 B-1
Q115 C-6
Q116 B-6
Q117 C-6
Q118 A-6
Q119 A-6
Q120 B-6
Q204 D-1
Q215 D-6
Q216 D-6
Q217 D-6
Q218 E-6
Q219 E-6
Q220 D-6
Q309 C-6
Q310 D-6
Q311 C-6

RV110 B-6
RV111 B-5
RV112 B-6
RV113 C-5
RV114 A-5
RV210 E-6
RV211 E-5
RV212 D-6
RV213 D-5
RV214 E-5

S101 C-5
S102 B-6
S201 C-5
S202 E-6

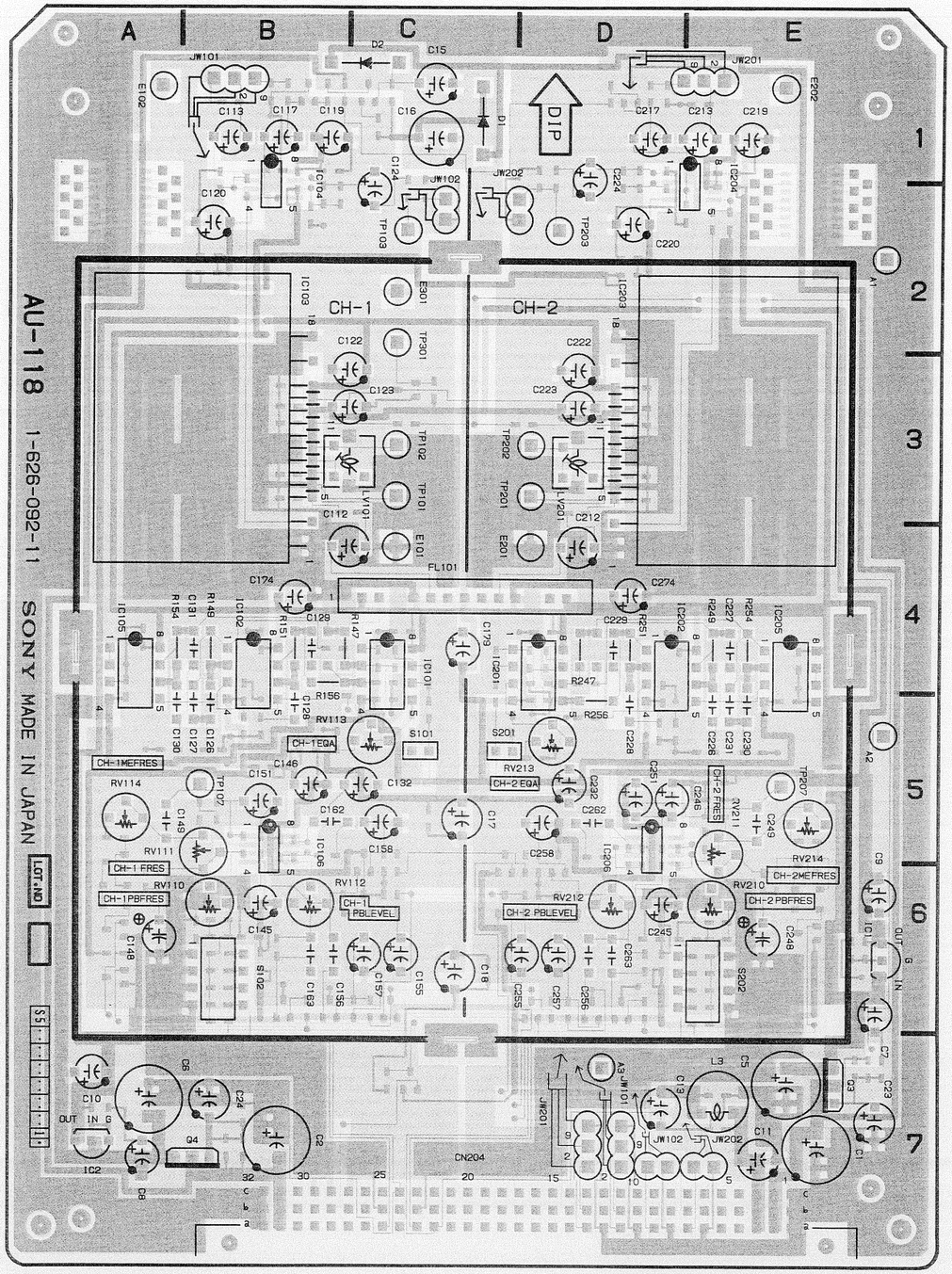
TP101 C-3
TP102 C-3
TP103 C-2
TP107 B-5
TP201 D-3
TP202 D-3
TP203 D-2
TP207 E-5
TP301 C-3

AU-118P; LNG AUDIO HEAD AMPLIFIER

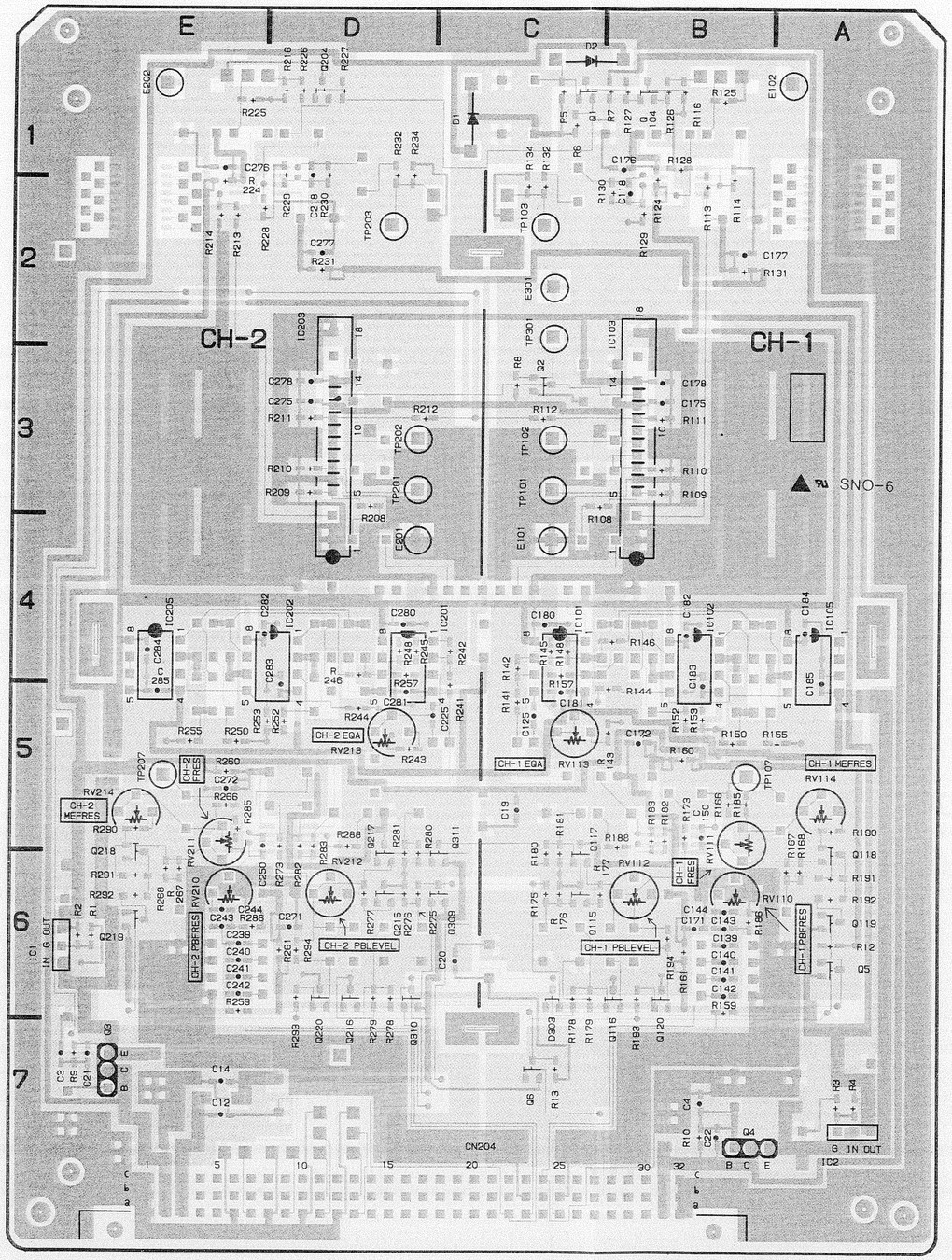


AU-118P — COMPONENT SIDE —
1-626-092-11
BVW-60P
BVW-65P
BVW-95P

AU-118P; LNG AUDIO HEAD AMPLIFIER



AU-118P — COMPONENT SIDE —
1-626-092-11
BVW-60P
BVW-65P
BVW-95P



AU-118P — SOLDERING SIDE —
1-626-092-11
BVW-60P
BVW-65P
BVW-95P

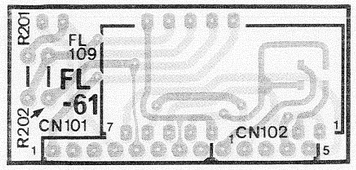
AFM-1A (1-622-569-21, 22)

REF.NO	TYPE	PIN NO.			
		+12V	+5V	GND	−12V
IC 1	AN3920K		7	1.19	
IC 2	AN3920K		7	1.19	
IC 101	AN3922NK		6	4.15	
IC 102	AN3922NK		6	4.15	
IC 103	TC4053BF		16	8	
IC 104	NJM2041M-D	8			4
IC 201	AN3922NK		6	4.15	4
IC 202	AN3922NK		6	4.15	
IC 303	NJM2041M-D	8			4
IC 304	NJM5532M	8			4
IC 403	NJM2041M-D	8			4
IC 404	NJM5532M	8			4
IC 501	CX20099		15	1.14	
IC 701	TC4011BF		14	7	4
IC 702	TC4030BF		14	7	
IC 703	TC504013BF		14	7	4
IC 704	TC4538BF		16	8	4
IC 705	TC4538BF		16	8	
IC 706	TC4001BF		14	7	
IC 707	TC4001BF		14	7	4
IC 708	NJM78L06A			2	
IC 710	NJM7805A	*	*	2	*

* REFER TO SCHEMATIC

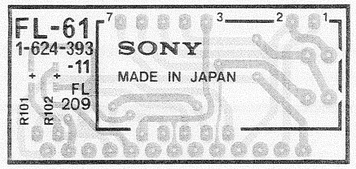
AFM-1A (1-622-569-21, 22)

D101	E-1	IC702	A-6	TP1	C-7
D102	E-3	IC703	B-5	TP2	D-7
D201	A-2	IC704	B-7	TP3	D-1
D202	A-4	IC705	A-5	TP4	B-1
D901	C-2	IC706	A-6	TP5	D-1
D902	C-2	IC707	A-5	TP6	B-2
		IC708	E-7	TP101	E-1
E1	E-6	IC710	E-3	TP102	B-4
E101	E-4			TP103	E-2
E201	B-4	Q1	C-7	TP201	B-2
E301	C-5	Q2	C-7	TP202	C-4
E401	E-5	Q4	D-7	TP203	B-3
E501	D-5	Q304	C-6	TP302	C-5
E701	B-5	Q404	E-6	TP303	B-6
		Q701	E-7	TP304	B-6
FL1	C-7	Q702	A-7	TP402	D-5
FL2	D-7	Q705	A-5	TP403	E-5
FL3	E-1	Q706	A-4	TP406	D-5
FL4	B-1	Q707	B-5	TP503	C-5
FL5	B-1	Q901	C-2	TP701	B-6
FL6	E-1	Q902	C-2	TP706	B-4
FL9	D-4	Q903	C-2		
		Q904	D-2		
IC1	D-1				
IC2	C-1	RV2	D-2		
IC101	E-2	RV4	C-2		
IC102	E-3	RV5	D-1		
IC103	B-4	RV6	B-2		
IC104	C-3	RV101	E-2		
IC201	B-2	RV102	B-3		
IC202	B-3	RV103	D-3		
IC303	B-6	RV105	B-4		
IC304	B-6	RV201	A-2		
IC403	E-5	RV202	C-3		
IC404	E-6	RV203	A-3		
IC501	D-6	RV205	B-4		
IC701	B-6				
		S1	B-1		



FL-61 — COMPONENT SIDE —

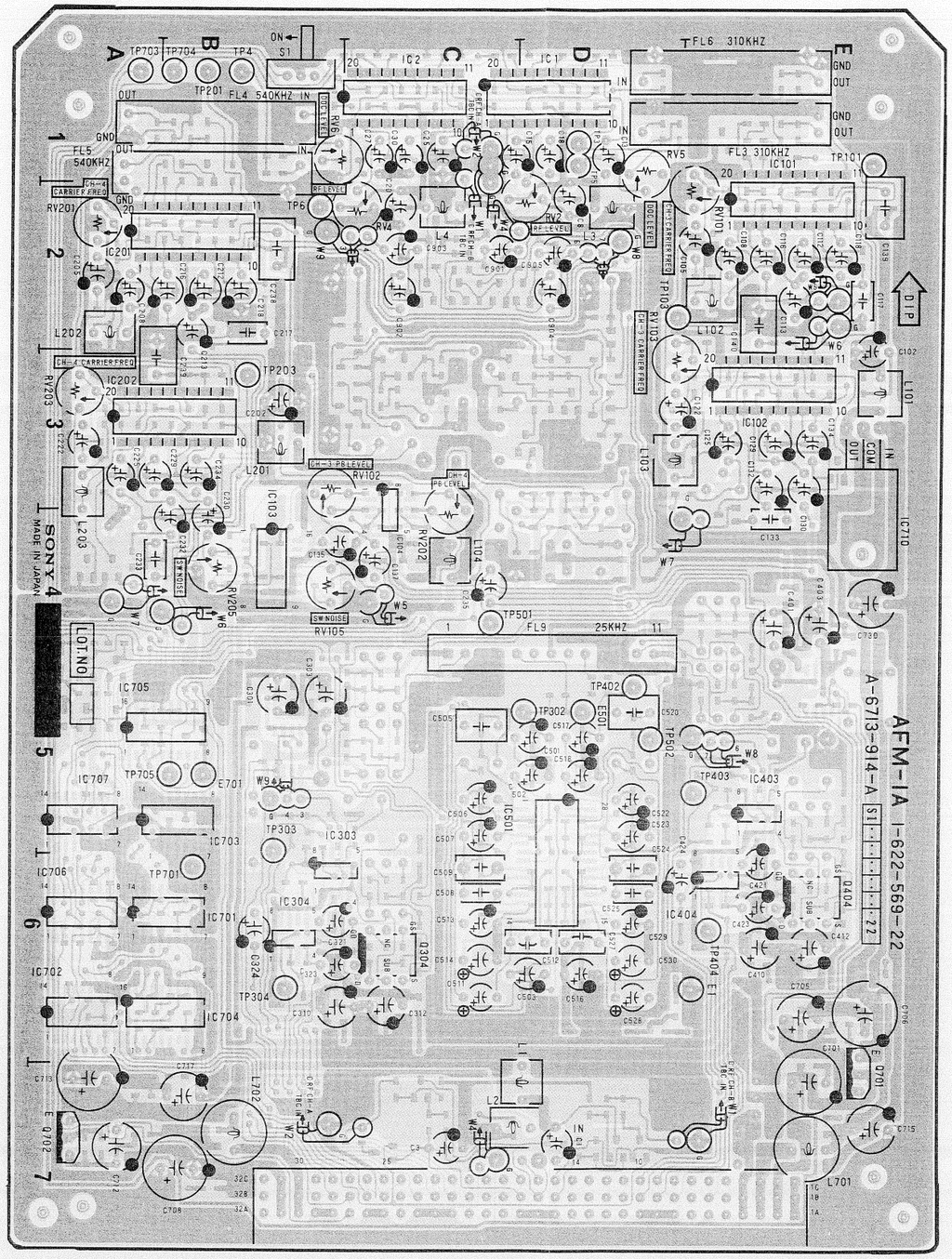
1-624-393-11
BVW-60P
BVW-65P
BVW-95P



FL-61 — SOLDERING SIDE —

1-624-393-11
BVW-60P
BVW-65P
BVW-95P

AFM-1A; AFM AUDIO DEMODULATOR
FL-61; AUDIO LPF

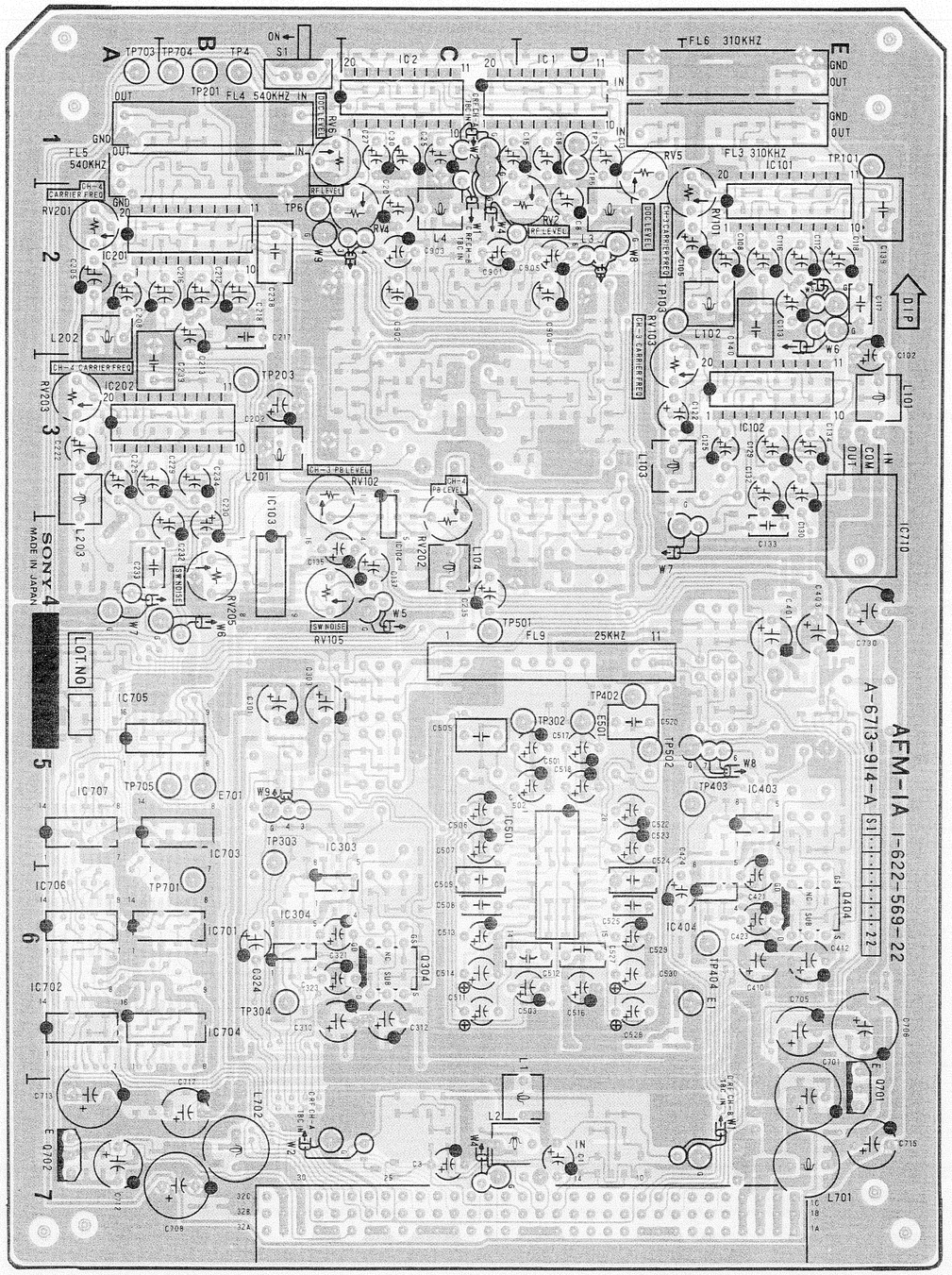


AFM-1A —COMPONENT SIDE—

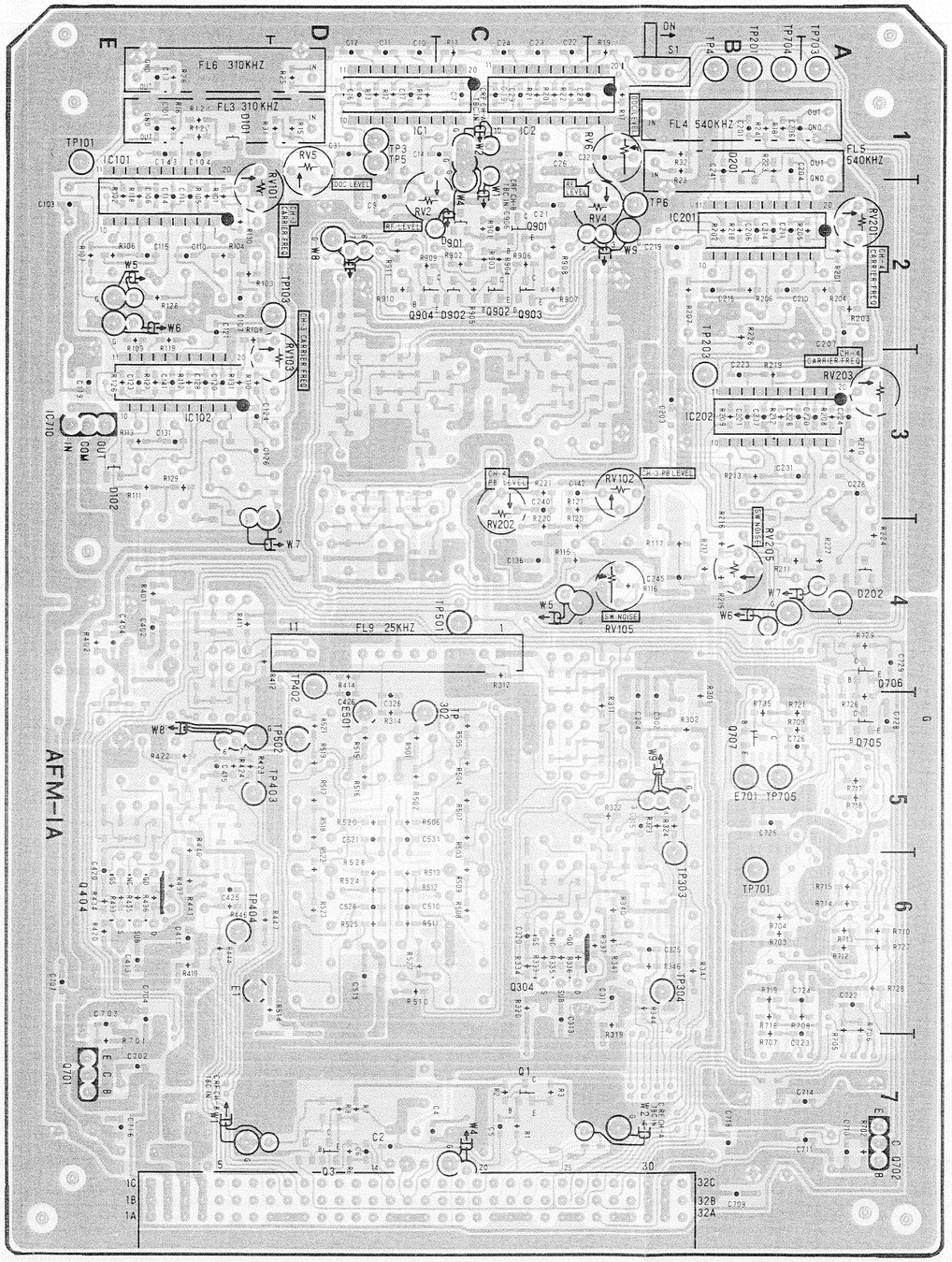
1-622-569-21, 22
BVW-60P
BVW-65P
BVW-95P

AFM-1A, FL-61

AFM-1A; AFM AUDIO DEMODULATOR
FL-61; AUDIO LPF



AFM-1A —COMPONENT SIDE—
1-622-569-21, 22
BVW-60P
BVW-65P
BVW-95P



AFM-1A —SOLDERING SIDE—
1-622-569-21, 22
BVW-60P
BVW-65P
BVW-95P

BF-28A (1-622-574-22)

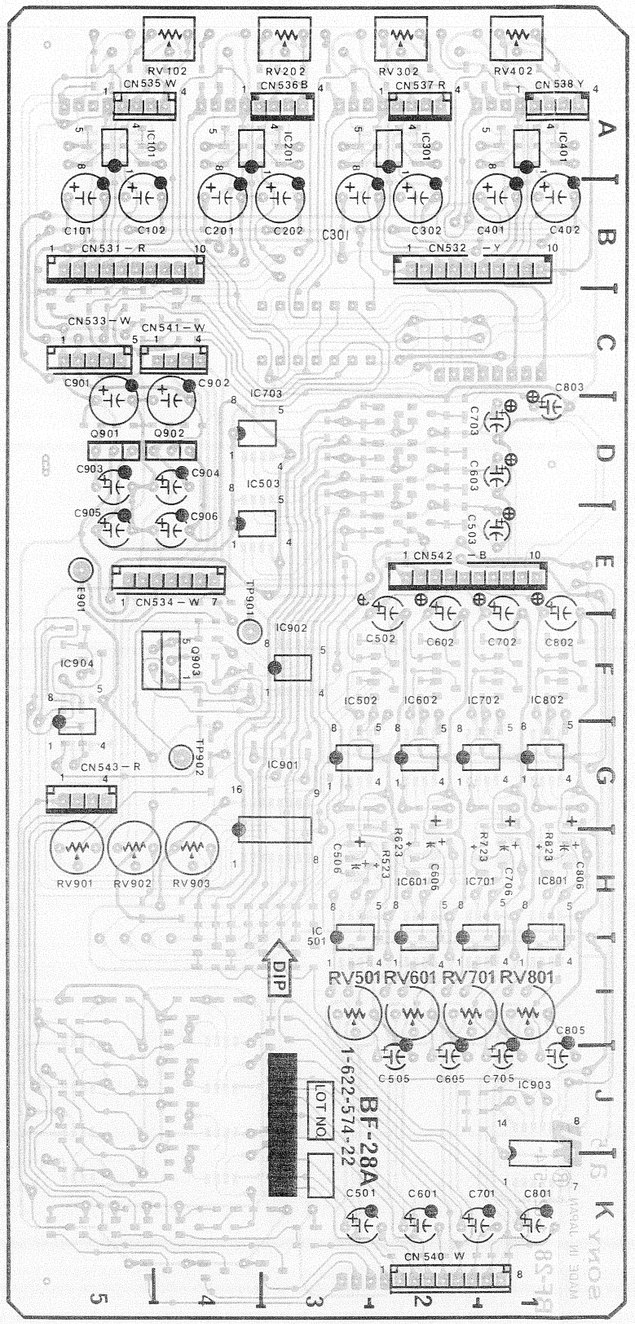
REF.NO	TYPE	PIN NO.			
		+12V	+8V	−8V	−12V
IC 101	NJM2041M-D	8			4
IC 201	NJM2041M-D	8			4
IC 301	NJM2041M-D	8			4
IC 401	NJM2041M-D	8			4
IC 501	NJM4560M		8	4	4
IC 502	NJM4560M		8	4	
IC 503	NJM4560M		8	4	4
IC 601	NJM4560M		8	4	
IC 602	NJM4560M		8	4	4
IC 701	NJM4560M		8	4	
IC 702	NJM4560M		8	4	
IC 703	NJM4560M		8	4	
IC 801	NJM4560M		8	4	
IC 802	NJM4560M		8	4	
IC 901	BU4052BF		16	8	
IC 902	NJM2041M-D		8	4	
IC 903	TC4030BF		14	7	
IC 904	NJM4560M		8	4	

* REFER TO SCHEMATIC

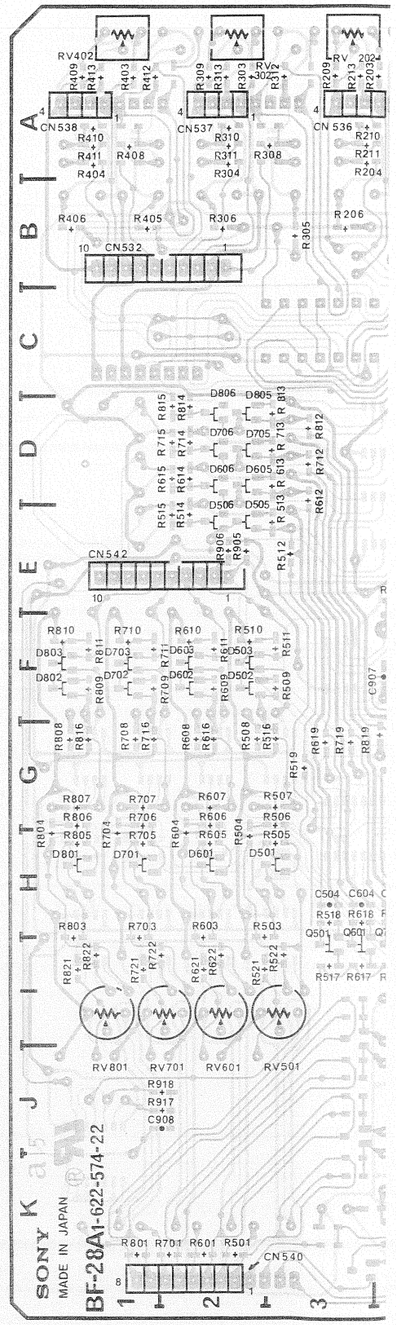
BF-28A (1-622-574-22)

CN531	B-5	RV401	A-2
CN532	B-2	RV402	A-1
CN533	C-5	RV501	I-3
CN534	E-4	RV601	I-2
CN535	A-5	RV701	I-2
CN536	A-3	RV801	I-1
CN537	A-2	RV901	H-5
CN538	A-1	RV902	H-5
CN539	C-1	RV903	H-4
CN540	K-2		
CN541	C-4	TP901	F-4
CN542	E-2	TP902	G-4
CN543	G-5		
D501	H-3		
D502	F-2		
D503	F-2		
D505	E-2		
D506	E-2		
D601	H-2		
D602	F-2		
D603	F-2		
D605	D-2		
D606	D-2		
D701	H-1		
D702	F-1		
D703	F-1		
D705	D-2		
D706	D-2		
D801	H-1		
D802	F-1		
D803	F-1		
D805	D-2		
D806	D-2		
D901	F-4		
D902	F-5		
E901	E-5		
IC101	A-5		
IC201	A-4		
IC301	A-2		
IC401	A-1		
IC501	H-3		
IC502	G-3		
IC503	B-4		
IC601	H-2		
IC602	G-2		
IC701	H-1		
IC702	G-1		
IC703	D-4		
IC801	H-1		
IC802	G-1		
IC901	G-3		
IC902	F-3		
IC903	J-1		
IC904	F-5		
Q501	I-3		
Q601	I-3		
Q701	I-4		
Q801	I-4		
Q901	D-5		
Q902	D-4		
Q903	F-4		
RV102	A-4		
RV202	A-3		
RV302	A-2		

BF-28A; AUDIO BUFFER/LEVEL METER DRIVER
VR-42; AUDIO PB VOLUME



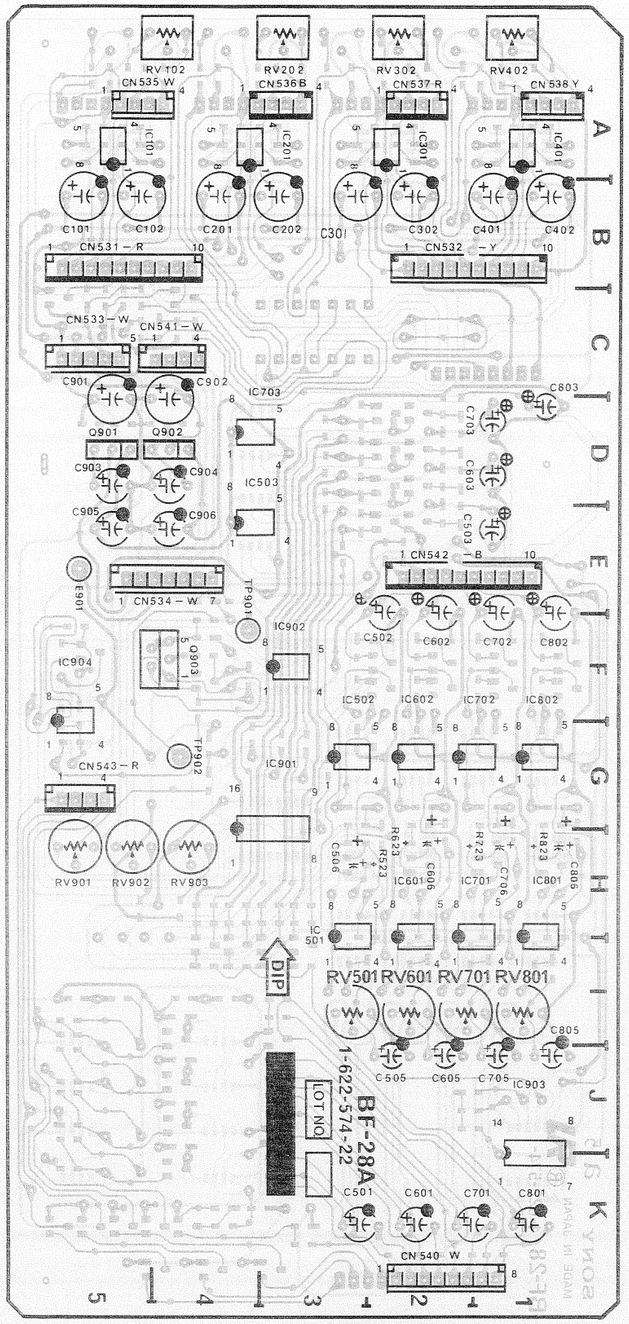
BF-28A — COMPONENT SIDE —
1-622-574-22
BVW-60P
BVW-65P
BVW-95P



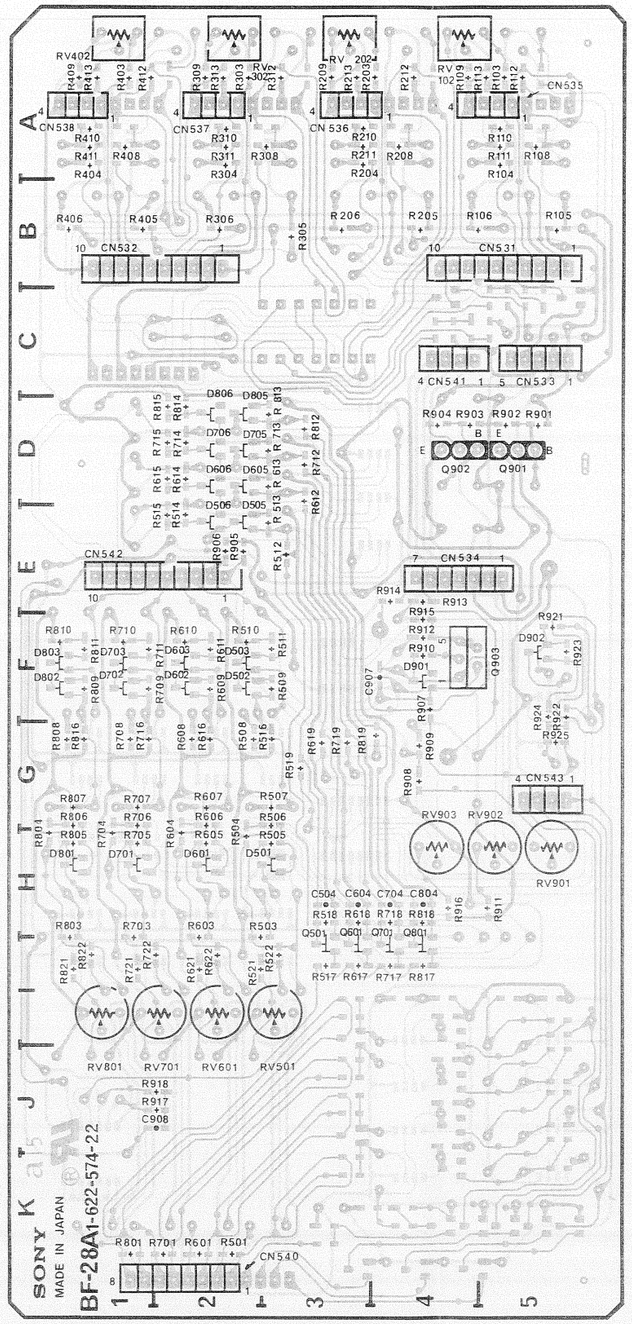
BF-
1-622-574
BVW-60P
BVW-65P
BVW-95P

BF-28A, VR-42

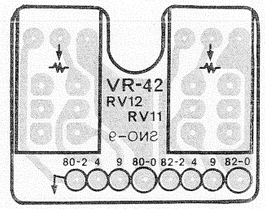
BF-28A ; AUDIO BUFFER/LEVEL METER DRIVER
VR-42 ; AUDIO PB VOLUME



BF-28A — COMPONENT SIDE —
1-622-574-22
BVW-60P
BVW-65P
BVW-95P



BF-28A — SOLDERING SIDE —
1-622-574-22
BVW-60P
BVW-65P
BVW-95P



VR-42 — COMPONENT SIDE —
1-622-592-11,12
BVW-60P
BVW-65P
BVW-95P

CP-111, CP-113, HP-33, VR-62

CP-111 ; AUDIO OUTPUT AMPLIFIER/DRIVER
CP-113 ; AUDIO BALANCED AMPLIFIER
HP-33 ; HEADPHONES AMPLIFIER/JACK
VR-62 ; HEADPHONES LEVEL VOLUME

Up to S/N 11037

CP-111 (1-622-571-12)

REF.NO	TYPE	PIN NO. +12V	PIN NO. -12V
IC 31	NJM4560D-D	8	4
IC 32	CX770	*	*
IC 33	NJM4560D-D	8	4
IC 34	NJM4560D-D	8	4
IC 35	NJM4560D-D	8	4
IC 36	CX770	*	*
IC 37	NJM4560D-D	8	4
IC 38	CX770	*	*
IC 39	NJM4560D-D	8	4
IC 40	NJM4560D-D	8	4

*REFER TO SCHEMATIC

S/N 11038 and higher

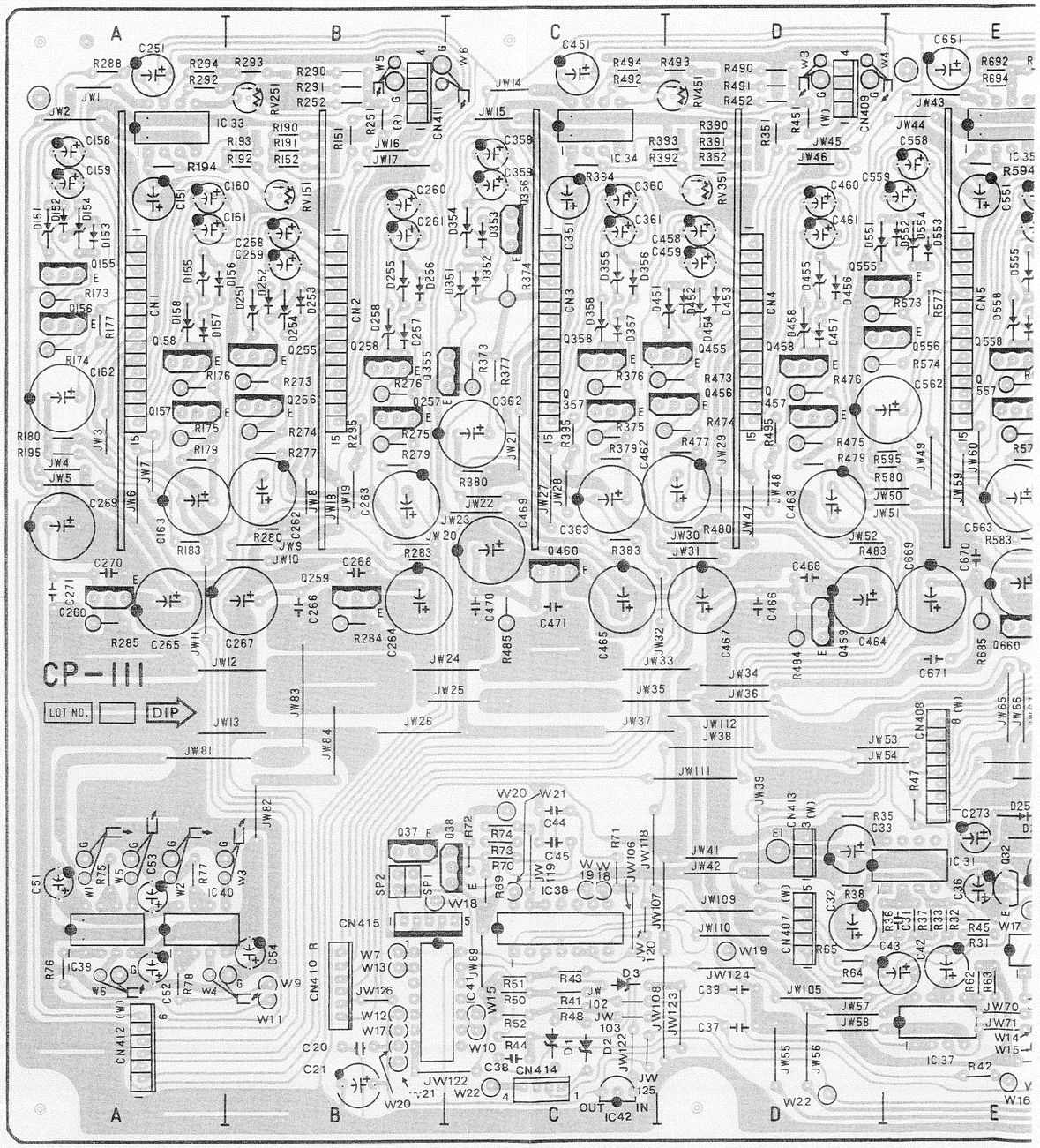
CP-111 (1-622-571-13)

REF.NO	TYPE	PIN NO. +12V	PIN NO. +5V	PIN NO. -12V
IC 31	NJM4560D-D	8		4
IC 32	TC4016BP		14	7
IC 33	NJM4560D-D	8		4
IC 34	NJM4560D-D	8		4
IC 35	NJM4560D-D	8		4
IC 36	TC4016BP		14	7
IC 37	NJM4560D-D	8		4
IC 38	TC4016BP		14	7
IC 39	NJM4560D-D	8		4
IC 40	NJM4560D-D	8		4
IC 41	TC4016BP		14	7
IC 42	NJM78L05	*	*	*

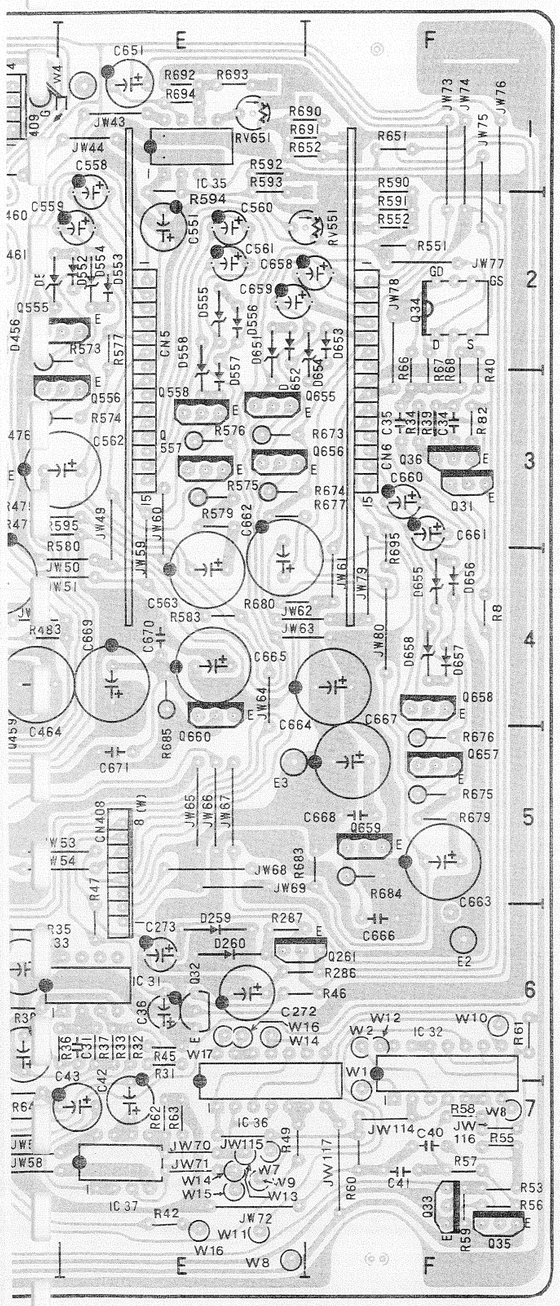
*REFER TO SCHEMATIC

CP-111 (1-622-571-12,13)

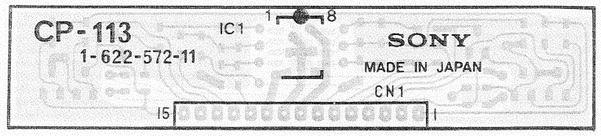
CN1	A-3	E1	D-6
CN2	B-3	E2	F-6
CN3	C-3	E3	E-5
CN4	D-3	E4	F-6
CN5	E-3		
CN6	F-3	IC31	E-6
CN407	D-6	IC32	F-6
CN408	E-5	IC33	A-1
CN409	D-1	IC34	C-1
CN410	B-7	IC35	E-1
CN411	B-1	IC36	E-6
CN412	A-7	IC37	E-7
CN413	D-6	IC38	C-6
CN414	C-7	IC39	A-6
CN415	B-6	IC40	A-6
		IC41	B-7
D151	A-2	IC42	C-7
D152	A-2		
D153	A-2	Q31	F-3
D154	A-2	Q32	B-6
D155	A-2	Q33	F-7
D156	A-2	Q34	F-2
D157	A-3	Q35	F-7
D158	A-3	Q36	F-3
D251	B-2	Q37	B-6
D252	B-2	Q38	C-6
D253	B-2	Q155	A-2
D254	B-2	Q156	A-2
D255	B-2	Q157	A-3
D256	B-2	Q158	A-3
D257	B-3	Q255	B-3
D258	B-3	Q256	B-3
D259	E-6	Q257	B-3
D260	E-6	Q258	B-3
D351	C-2	Q259	B-4
D352	C-2	Q260	A-4
D353	C-2	Q261	E-6
D354	C-2	Q355	C-3
D355	C-2	Q356	C-2
D356	C-2	Q357	C-3
D357	C-3	Q358	C-3
D358	C-3	Q455	D-3
D451	D-2	Q456	D-3
D452	D-2	Q457	D-3
D453	D-2	Q458	D-3
D454	D-2	Q459	D-4
D455	D-2	Q460	C-4
D456	D-2	Q555	B-2
D457	D-3	Q556	B-3
D458	D-3	Q557	B-3
D551	D-2	Q558	B-3
D552	E-2	Q655	B-3
D553	E-2	Q656	B-3
D554	E-2	Q657	F-5
D555	E-2	Q658	F-4
D556	E-2	Q659	F-5
D557	E-3	Q660	E-4
D558	E-2		
D651	E-2	RV151	B-2
D652	E-2	RV251	B-1
D653	F-2	RV351	D-2
D654	F-2	RV451	D-1
D655	F-4	RV551	F-2
D656	F-4	RV651	E-1
D657	F-4		
D658	F-4	SP1	B-6
		SP2	B-6



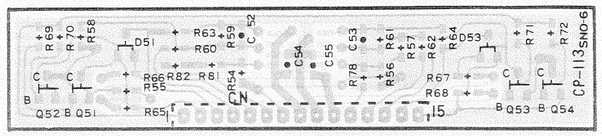
CP-111, CP-113, HP-33, VR-62



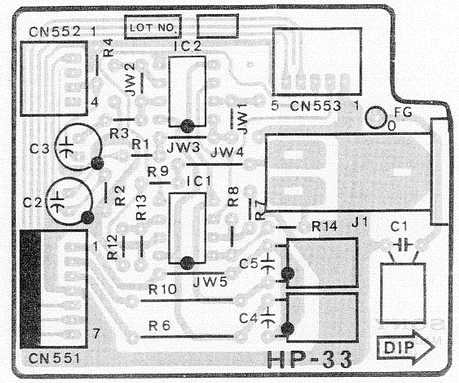
CP-111 — COMPONENT SIDE —
1-622-571-12, 13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



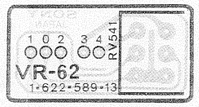
CP-113 — COMPONENT SIDE —
1-622-572-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



CP-113 — SOLDERING SIDE —
1-622-572-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



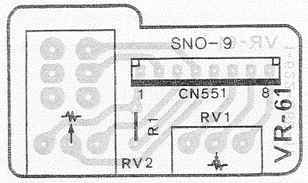
HP-33 — COMPONENT SIDE —
1-622-590-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



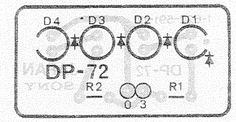
VR-62 — COMPONENT SIDE —
1-622-589-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SW-144A, VR-61, DP-72/73/74

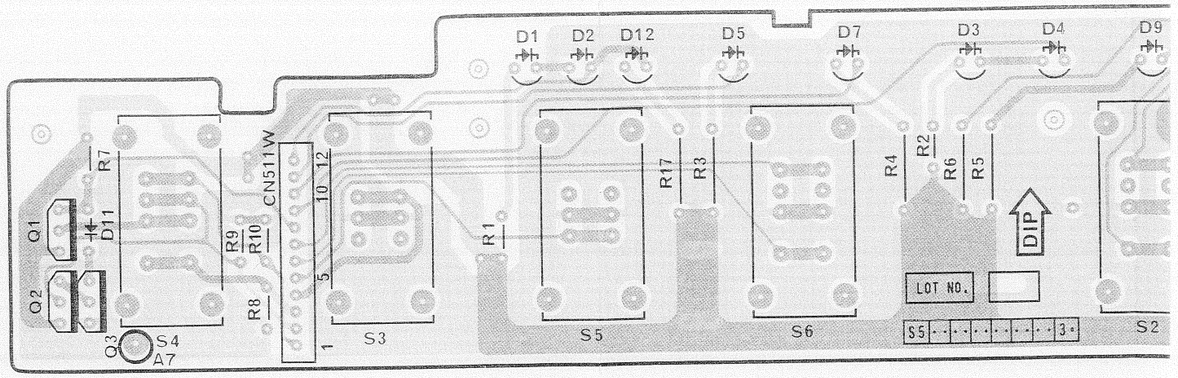
SW-144A; SELECT SWITCH/DISPLAY
VR-61; TRACKING CONTROL VOLUME
DP-72; RF METER LED
DP-74; AUDIO LEVEL METER
DP-73; DC-AC/DC CONVERTER



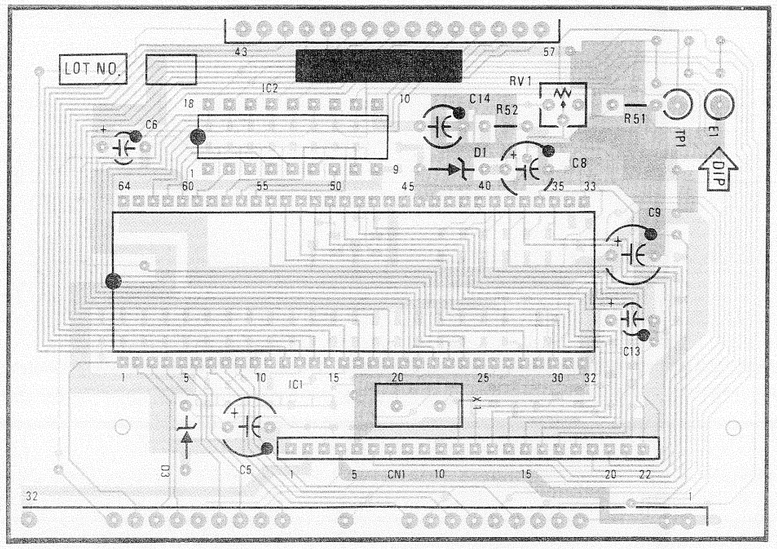
VR-61 — COMPONENT SIDE —
1-622-588-11
BVW-60P



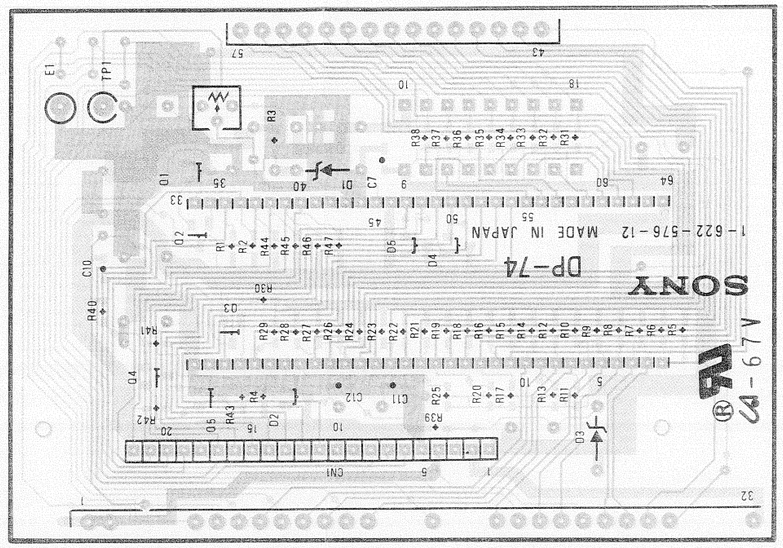
DP-72 — COMPONENT SIDE —
1-622-591-12
BVW-60P



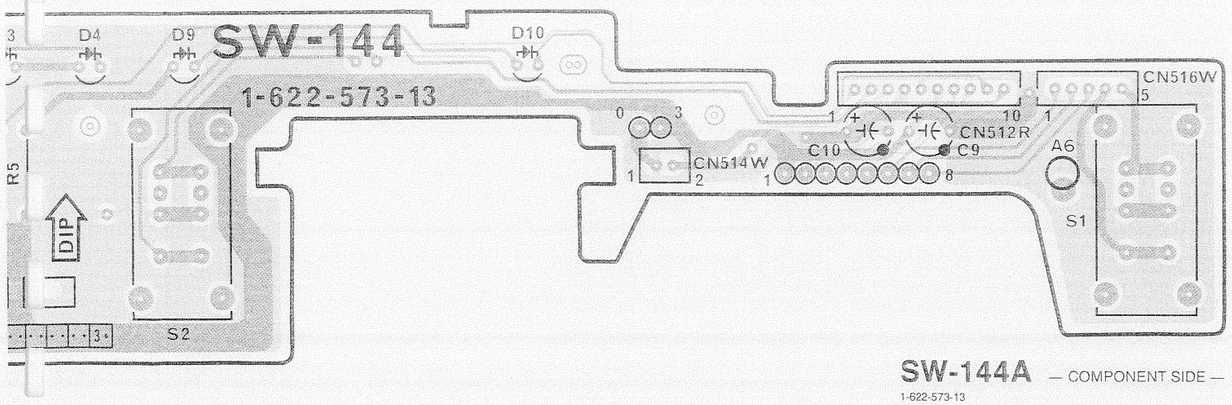
SW-144A, VR-61, DP-72/73/74



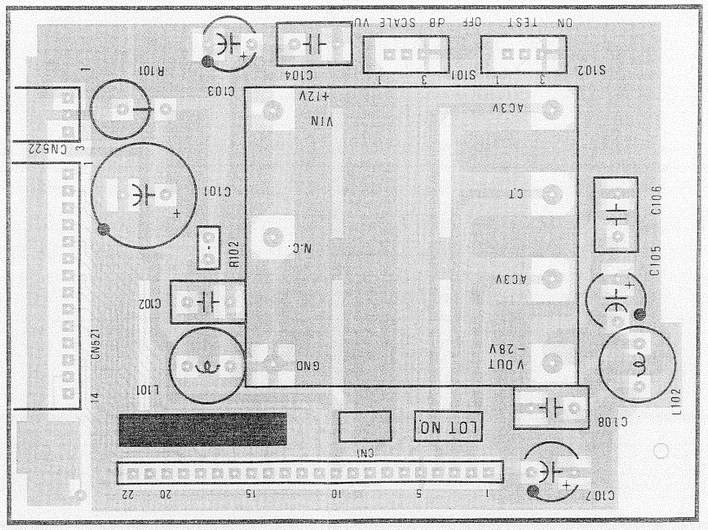
DP-74 — COMPONENT SIDE —
1-622-576-12
BVW-60P



DP-74 — SOLDERING SIDE —
1-622-576-12
BVW-60P



SW-144A — COMPONENT SIDE —
1-622-573-13
BVW-60P



DP-73 — SOLDERING SIDE —
1-622-575-12
BVW-60P

SV-82/82A; MICROCOMPUTER SERVO

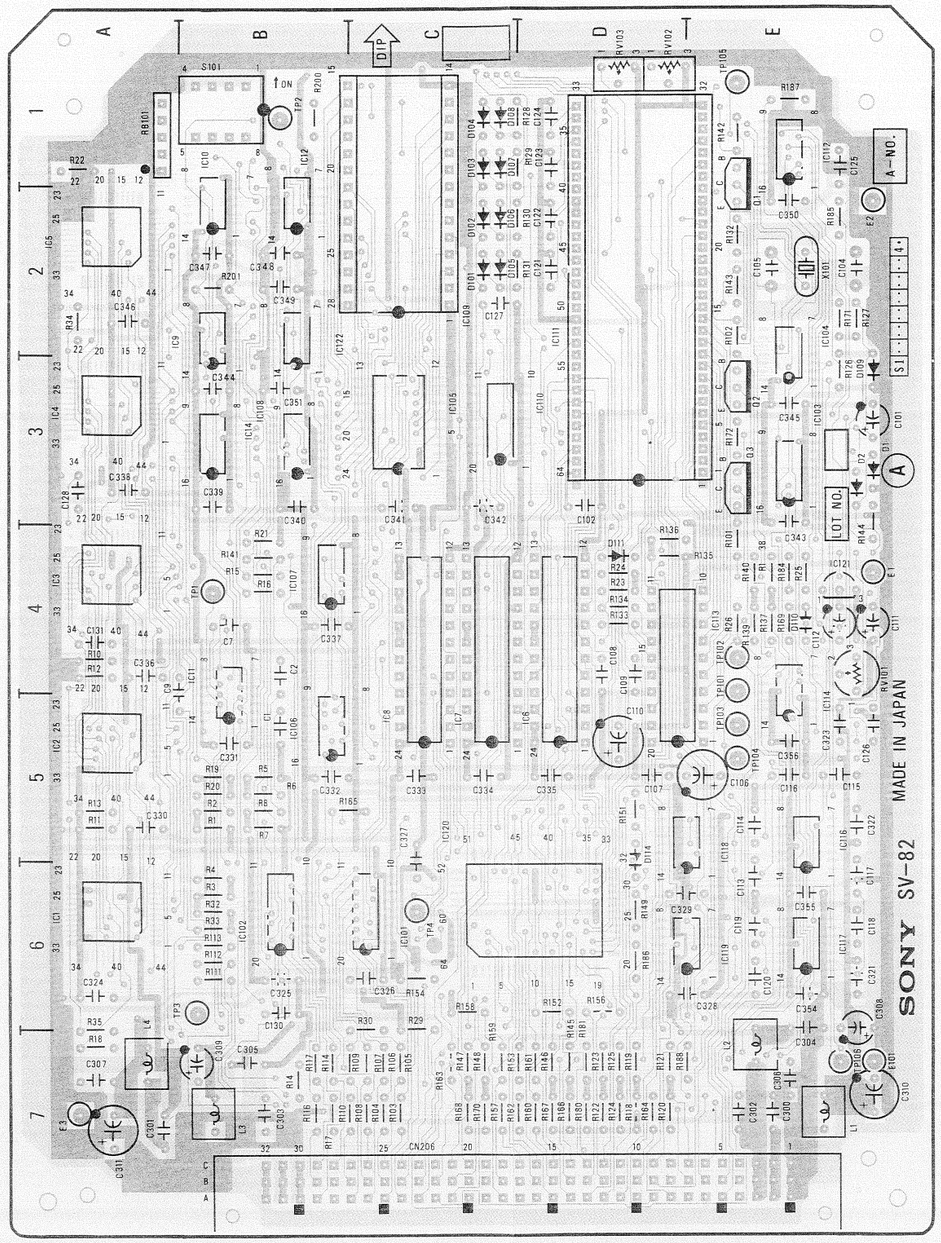
SV-82/82A (1-622-582-13,14)

REF.NO.	TYPE	PIN NO.				
		+12V	+5V	GND	−5V	−12V
IC 1	μPD71054G		38	16		
IC 2	μPD71054G		38	16		
IC 3	μPD71054G		38	16		
IC 4	μPD71054G		38	16		
IC 5	μPD71054G		38	16		
IC 6	CFX77074NT		23.24	9.12		
IC 7	CFX77074NT		23.24	9.12		
IC 8	CFX77074NT		23.24	9.12		
IC 9	TC74HC74F		14	7		
IC 10	SN74HC4024NS		14	7		
IC 11	TC74HC14F		14	7		
IC 12	TC74HC14F		14	7		
IC 14	TC4053BF		16	7.8		
IC 101	TC74HC245NS		20	10		
IC 102	TC74HC244F		20	10		
IC 103	TC4052BF		16	8		
IC 104	TC74HCU04F		14	6.7		
IC 105	CXK5816M-12L		24	12		
IC 106	TCX74HC138F		16	8		
IC 107	TCX74HC138F		16	8		
IC 108	TCX74HC139F		16	8		
IC 109	27256-25		28	14		
IC 110	SN74HC373NS		20	10		
IC 111	μPD78310CM		64	32		
IC 112	SN74HC4040NS		16	8		
IC 113	μPC648C	20				17
IC 114	TL084CNS	4				11
IC 116	TL084CNS	4				11
IC 117	TL084CNS	4				11
IC 118	TC4066BF		14	7		
IC 119	TC4066BF		14	7		
IC 120	CXD1095Q		58	10.27.42.57	26	
IC 121	NJM78L09A			2		
IC 122	TC74HC08F		14	7		

SV-82/82A (1-622-582-13,14)

CN206	C-7	Q1	E-2
		Q2	E-3
D101	C-2	Q3	E-3
D102	C-2		
D103	C-1	RV101	E-4
D104	C-1	RV102	D-1
D105	C-2	RV103	D-1
D106	C-2		
D107	C-1	S101	B-1
D108	C-1		
D109	E-3	TP1	B-4
D110	E-4	TP2	B-1
D111	D-4	TP3	B-6
D114	D-5	TP4	C-6
		TP101	E-4
E1	E-4	TP102	E-4
E2	E-2	TP103	E-5
E3	A-7	TP104	E-5
E101	E-7	TP105	E-1
		TP106	E-7
IC1	A-6		
IC2	A-5	X101	E-2
IC3	A-4		
IC4	A-3		
IC5	A-2		
IC6	D-4		
IC7	C-4		
IC8	C-4		
IC9	B-2		
IC10	B-2		
IC11	B-4		
IC12	B-2		
IC14	B-3		
IC101	C-6		
IC102	B-6		
IC103	E-3		
IC104	E-2		
IC105	C-3		
IC106	B-5		
IC107	B-4		
IC108	B-3		
IC109	C-2		
IC110	C-3		
IC111	D-2		
IC112	E-1		
IC113	D-4		
IC114	E-4		
IC116	E-5		
IC117	E-6		
IC118	D-5		
IC119	D-6		
IC120	C-6		
IC121	E-4		
IC122	B-2		

	SV-82	SV-82A
BVW-60P		○
BVW-65P		○
BVW-70P	○	
BVW-75P	○	
BVW-95P		○
BVW-96P	○	



SV-82/82A —COMPONENT SIDE—
1-622-582-13, 14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SV-82/82A; MICROCOMPUTER SERVO

14)

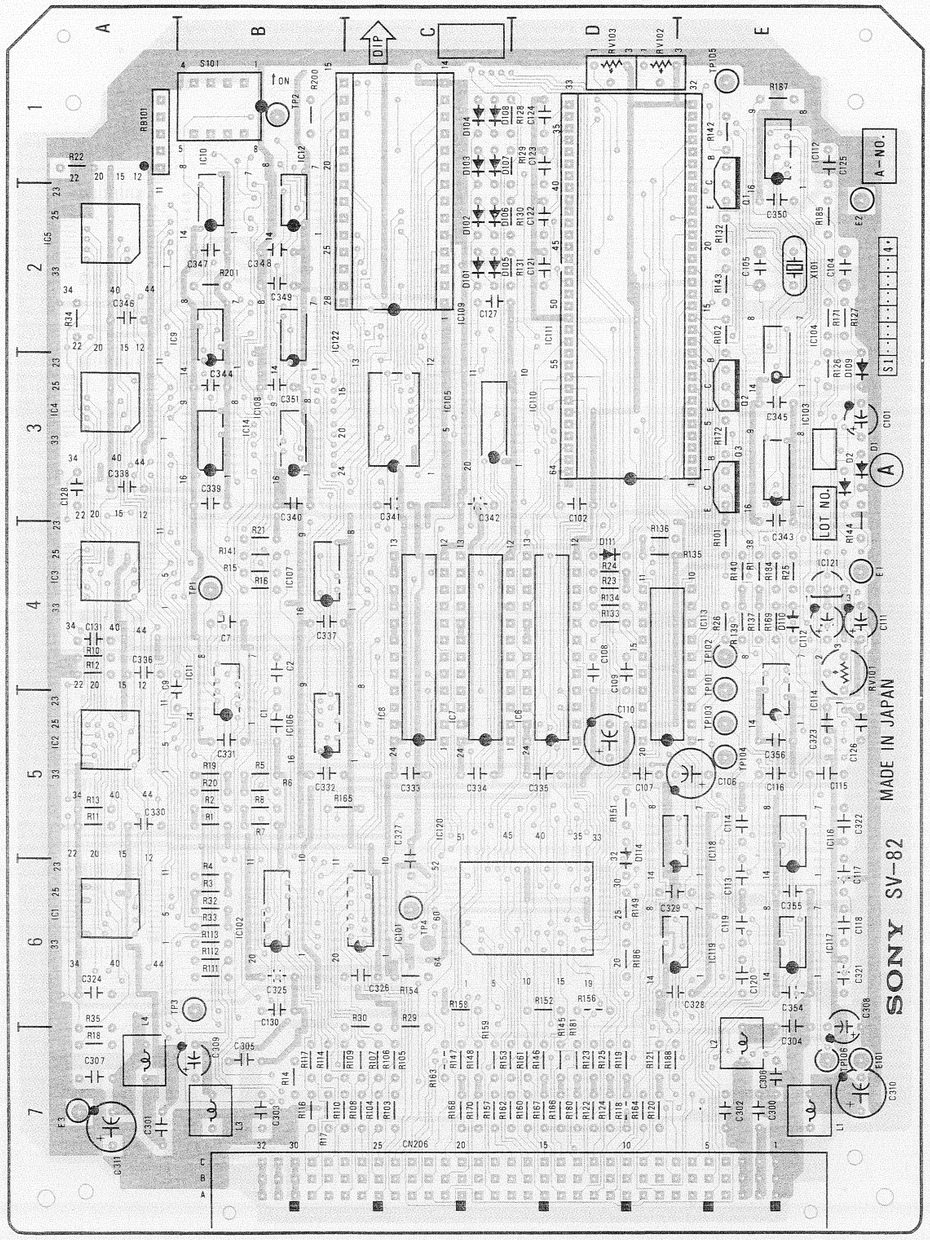
E-2
E-3
E-3

101 E-4
102 D-1
103 D-1

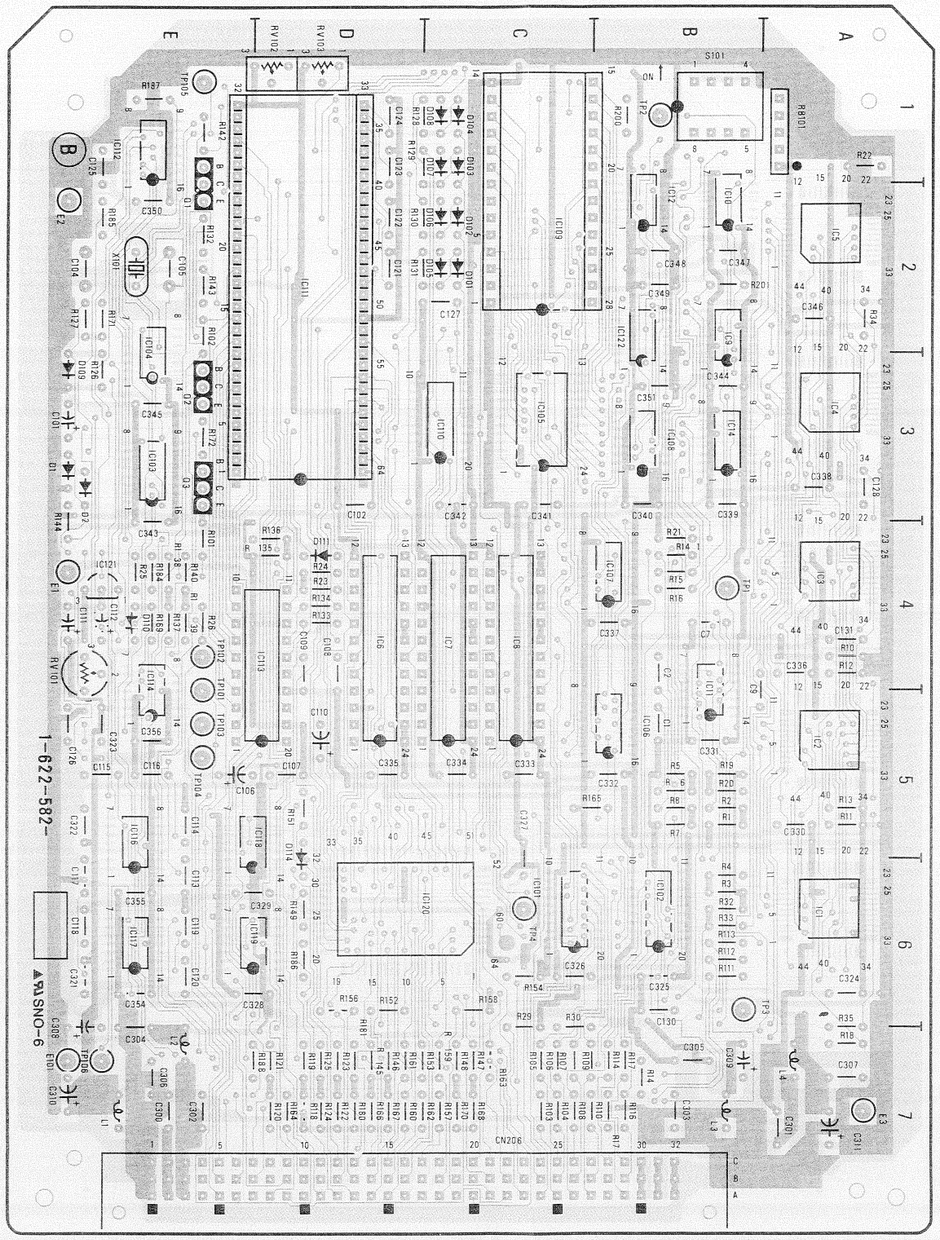
01 B-1

1 B-4
2 B-1
3 B-6
4 C-6
101 E-4
102 E-4
103 E-5
104 E-5
105 E-1
106 E-7

01 E-2



SV-82/82A —COMPONENT SIDE—
1-622-582-13, 14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



SV-82/82A —SOLDERING SIDE—
1-622-582-13, 14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SV-83/83A/83B (1-622-583-12,13)

REF.NO.	TYPE	PIN NO.				
		+12V	+5V	GND	−5V	−12V
IC 1	μPC324C	4			11	
IC 2	TL084CNS	4				11
IC 3	TL084CNS	4				11
IC 4	NJM4558D-FA	8			4	
IC 5	TL084CNS	4			11	
IC 6	TL084CNS	4				11
IC 7	NJM2903M	8		4		
IC 8	NJM2903M	8		4		
IC 10	CX23028		12.16	8		
IC 11	TC4053BFHB		16		7	
IC 201	BX3915A	*		2.8		
IC 202	TC4053BFHB		16	7.8		
IC 203	TC4538BF		16	8		
IC 204	TC504013BF		14	7		
IC 205	TC4081BF		14	7		
IC 206	NJM2903M	8		4		
IC 207	TC4538BF		16	8		
IC 208	TC4024BF		14	7		
IC 209	TC4024BF		14	7		
IC 210	NJM2903M		8	4		
IC 211	TC4011BF		14	7		
IC 212	TC4011BF		14	7		
IC 213	TC504013BF		14	7		
IC 214	TC4538BF		16	8		
IC 215	TC4538BF		16	8		
IC 216	TC504013BF		14	7		
IC 217	TC504013BF		14	7		
IC 218	TC4538BF		16	8		
IC 219	TC4053BFHB		16		7	
IC 220	TC74HC160BF		16	8		
IC 221	TC4030BF		14	7		

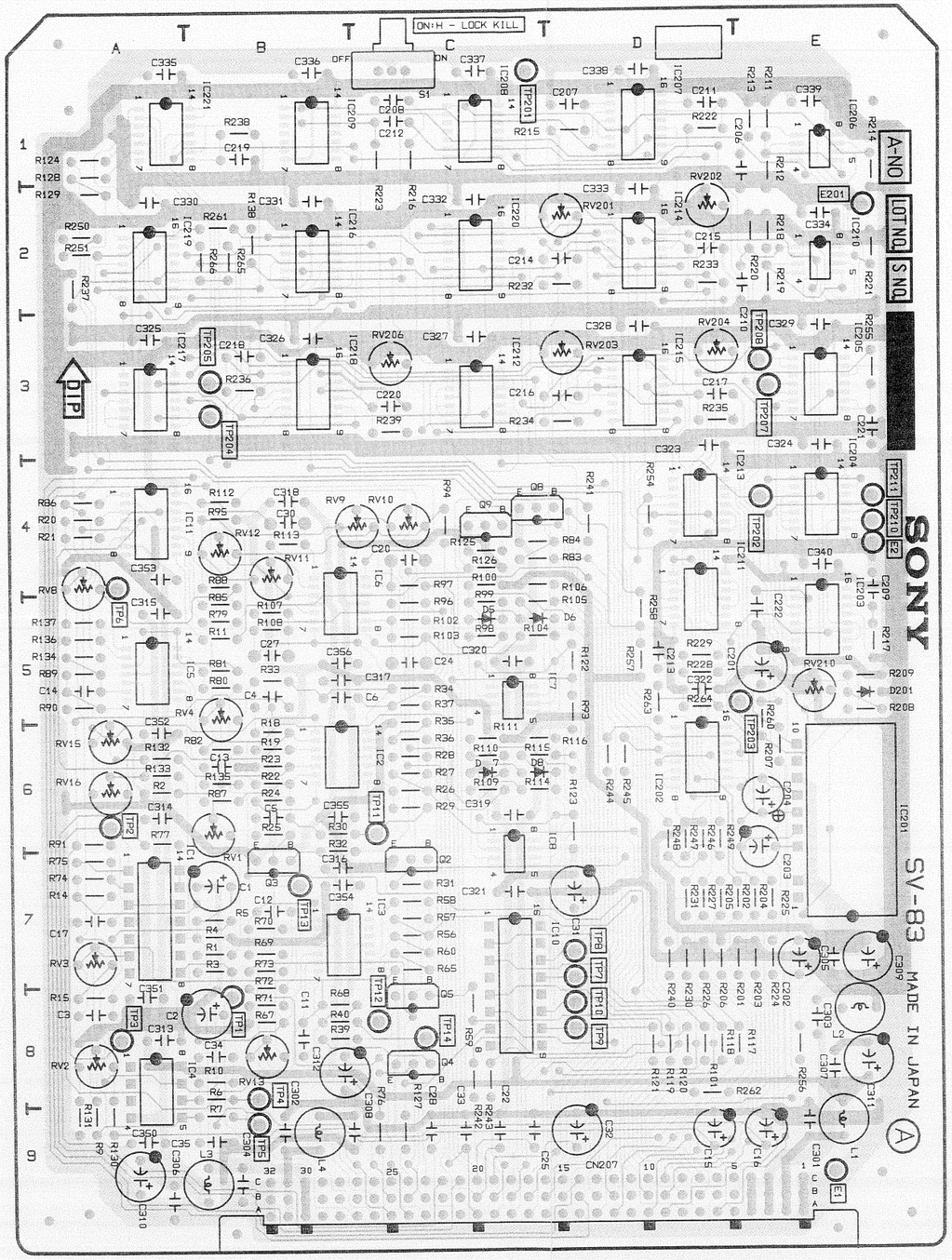
* REFER TO SCHEMATIC

	SV-83	SV-83A	SV-83B
BVW-60P			○
BVW-65P			○
BVW-70P		○	
BVW-75P	○		
BVW-95P			○
BVW-96P	○		

SV-83/83A/83B (1-622-583-12,13)

CN207	D-9
D5	C-5
D6	C-5
D7	C-6
D8	C-6
D201	E-5
E1	B-9
E2	E-4
E201	E-2
IC1	A-7
IC2	B-6
IC3	B-7
IC4	A-8
IC5	A-5
IC6	B-5
IC7	C-5
IC8	C-7
IC10	C-8
IC11	A-4
IC201	E-6
IC202	D-6
IC203	E-5
IC204	E-4
IC205	E-3
IC206	E-1
IC207	D-1
IC208	C-1
IC209	B-1
IC210	E-2
IC211	D-5
IC212	C-3
IC213	D-4
IC214	D-2
IC215	D-3
IC216	B-2
IC217	A-3
IC218	B-3
IC219	A-2
IC220	C-2
IC221	A-1
Q2	C-7
Q3	B-7
Q4	C-8
Q5	C-8
Q8	C-4
Q9	C-4
RV1	B-7
RV2	A-8
RV3	A-7
RV4	A-5
RV8	A-4
RV9	B-4
RV10	C-4
RV11	B-4
RV12	A-4
RV13	B-8
RV15	A-6
RV16	A-6
RV201	D-2
RV202	D-2
RV203	D-3
RV204	D-3
RV206	B-3
RV210	E-5
S1	A-3
TP1	A-8
TP2	A-6
TP3	A-8
TP4	B-9
TP5	B-9
TP6	A-4
TP7	D-8
TP8	D-7
TP9	D-8
TP10	D-8
TP11	B-6
TP12	B-8
TP13	B-7
TP14	C-8
TP201	C-1
TP202	E-4
TP203	E-6
TP204	A-3
TP205	A-3
TP207	E-3
TP208	E-3
TP210	E-4
TP211	E-4

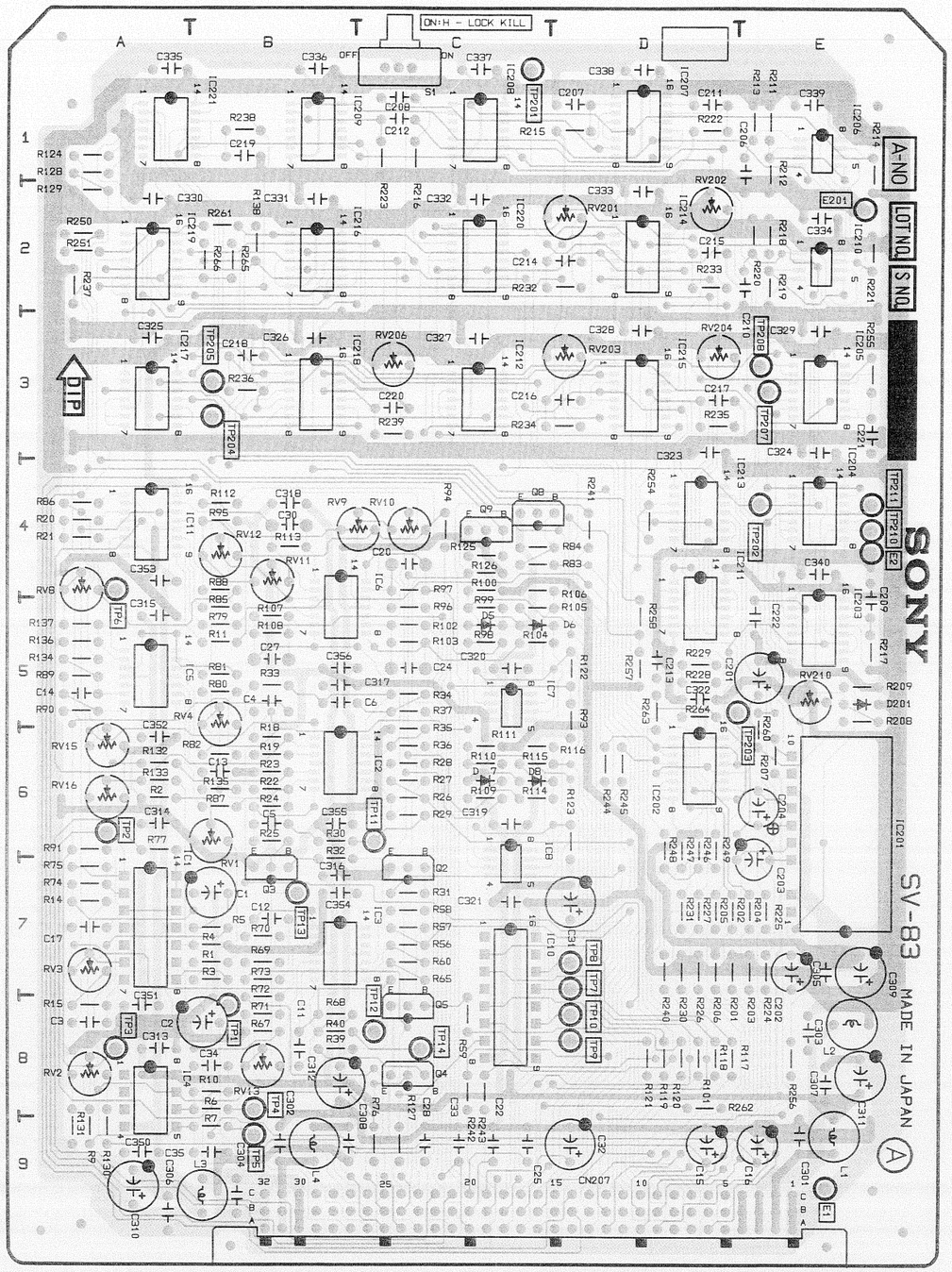
SV-83/83A/83B; REEL SERVO



SV-83/83A/83B —COMPONENT SIDE—

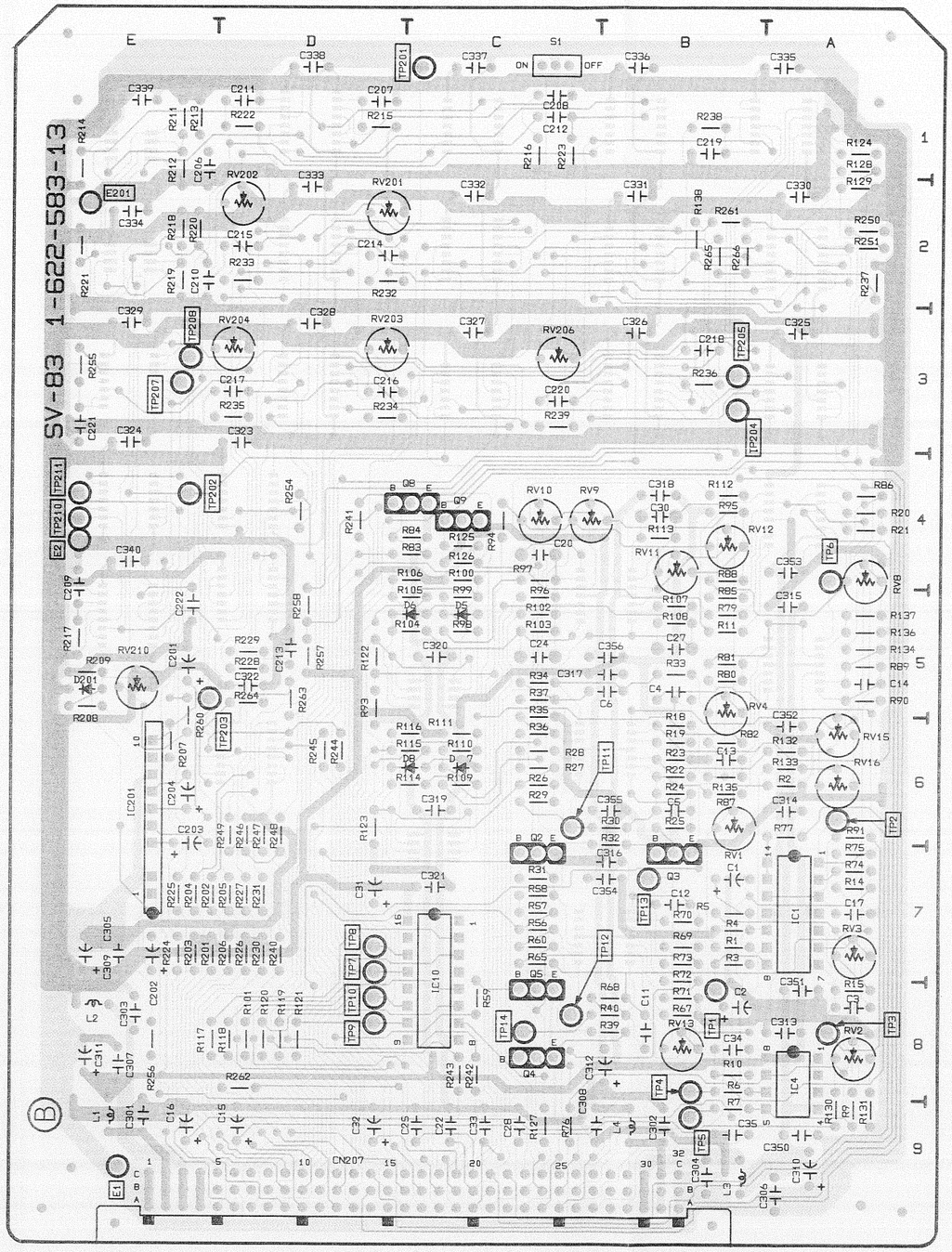
1-622-583-12, 13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SV-83/83A/83B; REEL SERVO



SV-83/83A/83B —COMPONENT SIDE—

1-622-583-12, 13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



SV-83/83A/83B —SOLDERING SIDE—

1-622-583-12, 13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SV-84P; CAPSTAN/DRUM SERVO

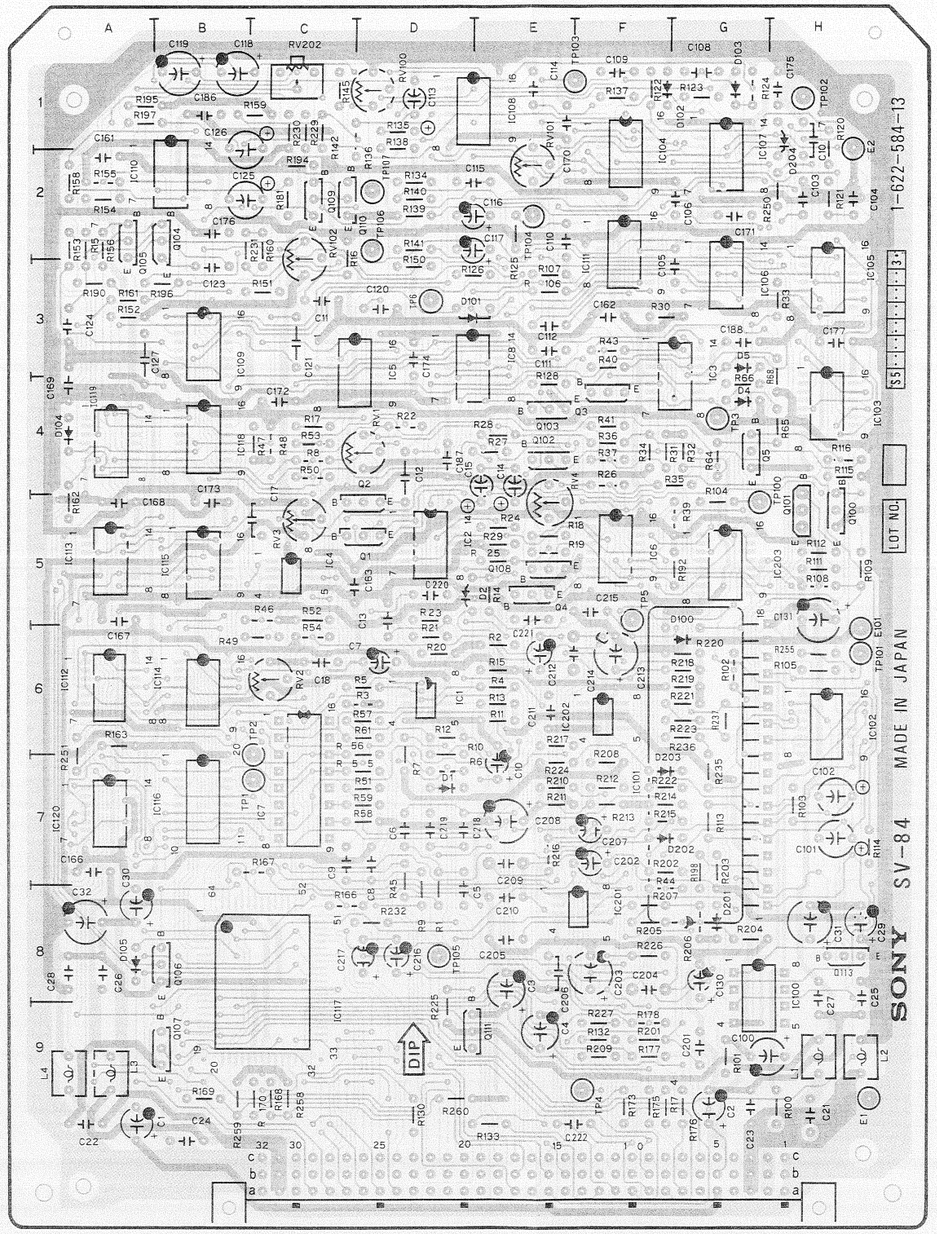
SV-84P (1-622-584-13)

PRE.NO	TYPE	PIN NO.					
		V REF.	+12V V	+5V	GND	−5V	−12V
IC 1	NJM2903M	8			4		
IC 2	TL084CNS		4			11	
IC 3	TL084CNS		4			11	
IC 4	NJM2903M		8		4		
IC 5	TC4538BF			16	8		
IC 6	TC4053BFHB		16		8	7	
IC 7	CX23028			12.16	8		
IC 8	TC4011BF			14	7		
IC 100	NJM4558D-D	*	8	4	*	*	*
IC 101	BX3914	*	*	*	17	*	*
IC 102	TC4053BFHB		16		8		
IC 103	TC4053BFHB		16		8		
IC 104	TC4053BFHB		16		8		
IC 105	TC4538BF			16	8		
IC 106	TC4001BF			14	7		
IC 107	TC4071BF			14	7		
IC 108	TC4538BF			16	8		
IC 109	SN74LS221NS			16	8		
IC 110	TL084CNS		4				11
IC 111	TC4538BF			16	8		
IC 112	TC40H000F			14	7		
IC 113	TC40H000F			14	7		
IC 114	SN74HC193F			16	8		
IC 115	SN74HC193F			16	8		
IC 116	SN74LS683NS			20	10		
IC 117	CXD1095Q			26.58	10.25.42.57		
IC 118	TC74HC4049F			1	8		
IC 119	TC74HC74F			14	7		
IC 120	TC74HC32F			14	7		
IC 201	NJM2903M			8	4		
IC 202	NJM2903M			8	4		
IC 203	TC4053BFHB		16		8		

*REFER TO SCHEMATIC

SV-84P (1-622-584-13)

CN208	E-9	Q1	D-5
		Q2	D-5
D1	D-7	Q3	F-4
D2	D-5	Q4	E-5
D4	G-4	Q5	G-4
D5	G-3	Q100	H-5
D100	G-6	Q101	H-5
D101	D-3	Q102	E-4
D102	F-1	Q103	E-4
D103	G-1	Q104	B-2
D104	A-4	Q105	A-2
D105	A-8	Q106	B-8
D201	G-8	Q107	B-9
D202	F-7	Q108	E-5
D203	F-7	Q109	C-2
D204	H-1	Q110	C-2
		Q111	D-9
E1	H-9	Q113	H-8
E2	H-1		
E101	H-6	RV1	D-4
		RV2	C-6
IC1	D-6	RV3	C-5
IC2	D-5	RV4	E-5
IC3	G-3	RV100	D-1
IC4	C-5	RV101	E-2
IC5	D-3	RV102	C-2
IC6	F-5	RV202	C-1
IC7	C-7		
IC8	E-3	TP1	C-7
IC100	G-8	TP2	C-7
IC101	G-7	TP3	G-4
IC102	H-6	TP4	F-9
IC103	H-4	TP5	F-5
IC104	F-1	TP6	D-3
IC105	H-3	TP100	G-5
IC106	G-3	TP101	H-6
IC107	G-2	TP102	H-1
IC108	E-1	TP103	E-1
IC109	B-3	TP104	E-2
IC110	B-2	TP105	D-8
IC111	F-2	TP106	D-2
IC112	A-6	TP107	D-2
IC113	A-5		
IC114	B-6		
IC115	B-5		
IC116	B-7		
IC117	C-8		
IC118	B-4		
IC119	A-4		
IC120	A-7		
IC201	F-8		
IC202	F-6		
IC203	G-5		

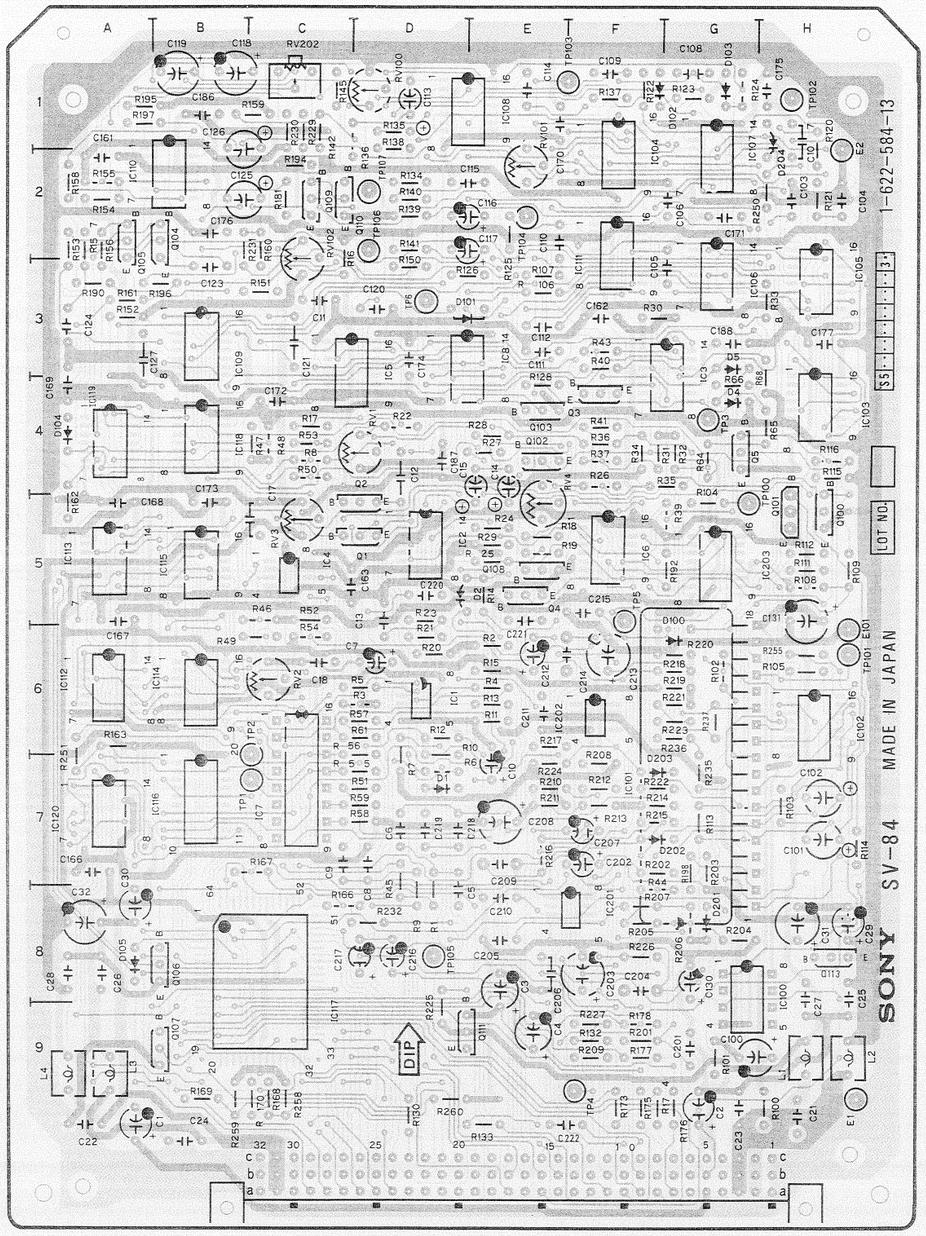


SV-84P — COMPONENT SIDE —

1-622-584-13

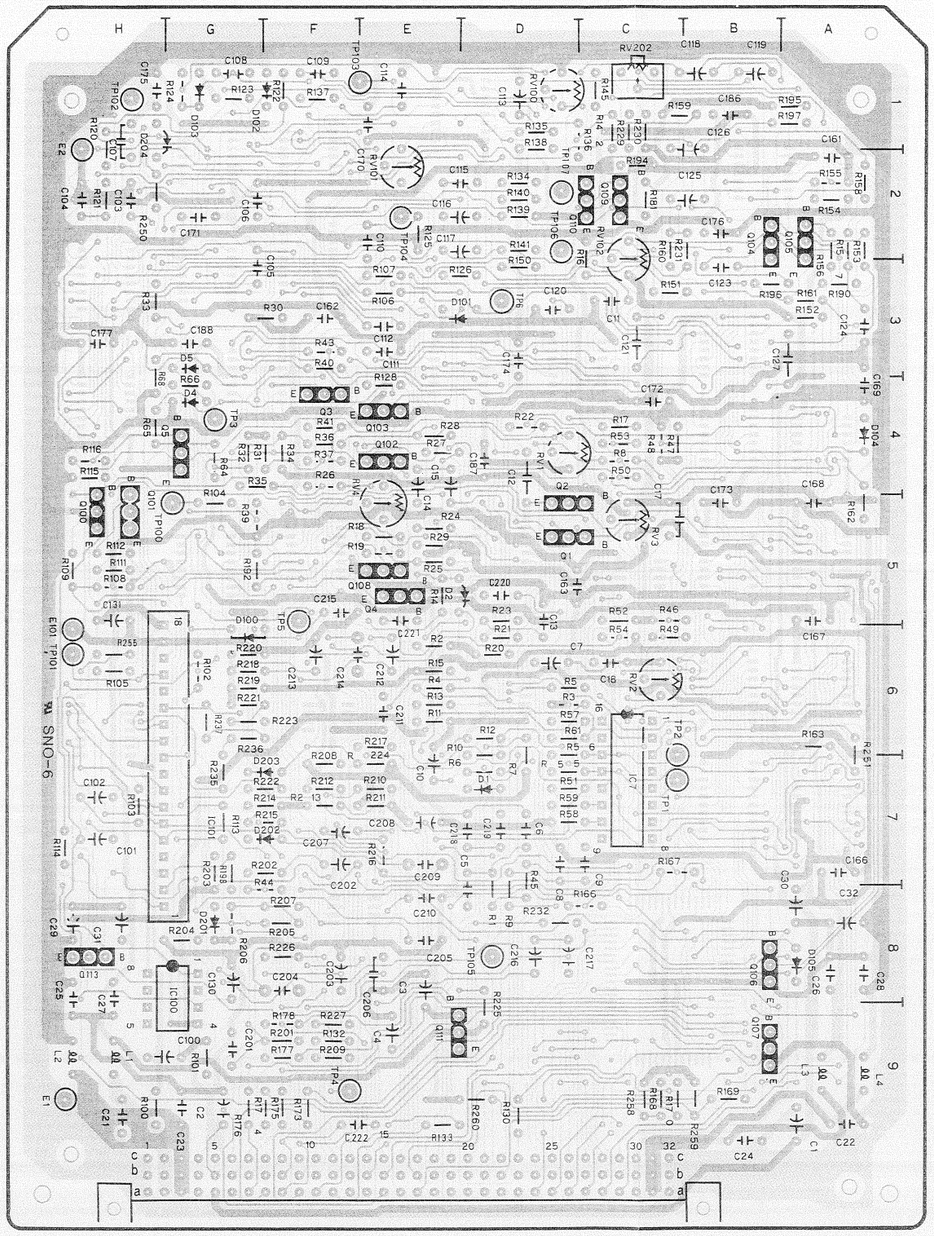
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SV-84P; CAPSTAN/DRUM SERVO



SV-84P — COMPONENT SIDE —

1-622-584-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



SV-84P — SOLDERING SIDE —

1-622-584-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

RE-28/36, DR-56, PTC-20/36/21, DE-15, RM-40, TR-18

RE-28 (1-622-559-11)

REF.NO.	TYPE	PIN NO.	
		+12V	GND
IC 1	CX877	8	*

RE-28 (1-622-559-11)

CN811 C-2
CN812 C-2
CN813 D-2
CN814 B-2
CN815 C-1
CN816 D-1
CN817 C-1
CN818 D-1
CN819 D-1
CN820 D-1
CN821 A-1
CN822 A-2
CN823 B-1
CN824 A-2

D1 B-1

E1 D-2

IC1 B-1

Q1 D-2
Q2 D-1
Q3 D-2
Q4 C-2
Q5 B-2
Q6 B-2

RE-36 (1-622-560-11)

REF.NO.	TYPE	PIN NO.	
		+12V	GND
IC 101	MJM4562D-D	8	4
IC 201	MJM4562D-D	8	4

RE-36 (1-622-560-11)

CN801 C-1
CN802 J-2
CN803 H-1
CN804 H-1
CN805 A-2
CN806 H-2
CN807 D-1
CN808 J-1
CN809 J-1
CN810 J-2
CN811 C-1
CN812 C-1
CN813 C-1

D1 J-1
D2 J-2

IC101 D-2
IC201 D-2

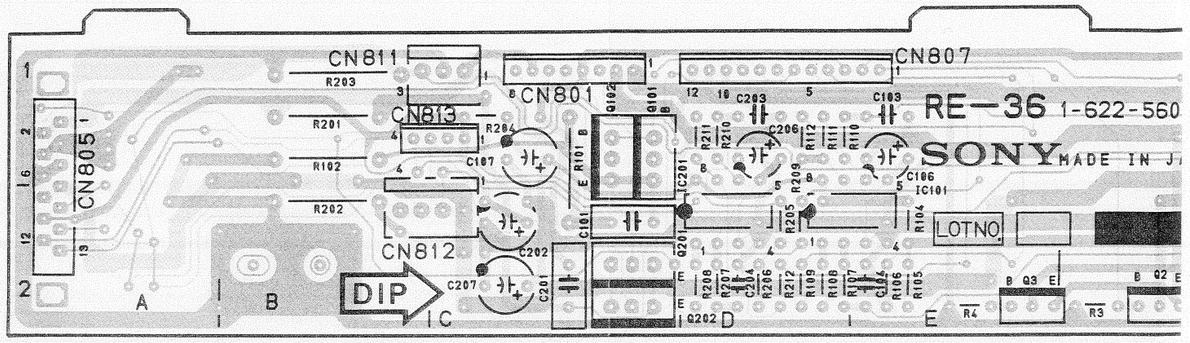
Q1 G-2
Q2 F-2
Q3 E-2
Q4 G-2
Q101 C-1
Q102 C-1
Q201 C-2
Q202 C-2

DR-56 (1-622-561-11, 12)

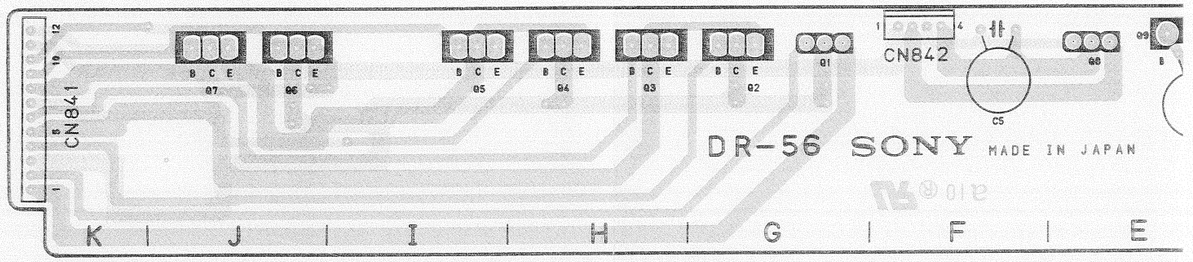
CN841 K-1
CN842 F-1
CN843 A-1

Q1 G-1
Q2 G-1
Q3 H-1
Q4 H-1
Q5 I-1
Q6 J-1
Q7 J-1
Q8 B-1
Q9 B-1
Q10 D-1
Q11 C-1
Q12 B-1

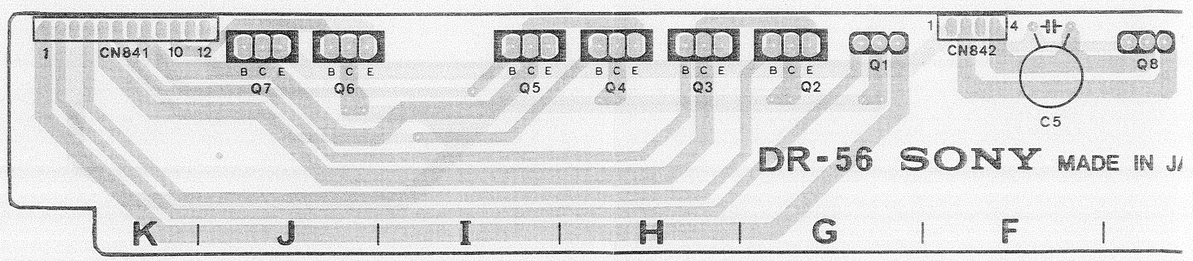
RE-28 ; DRUM/CAPSTAN MOTOR DRIVER
RE-36 ; REEL MOTOR DRIVER
DR-56 ; DRUM ERROR AMPLIFIER, CAPSTAN/REEL MOTOR DRIVER
PTC-20 ; CASSETTE DETECTOR
PTC-21 ; REEL TABLE POSITION DETECTOR
PTC-36 ; CASSETTE DETECTOR
DE-15 ; REEL FG
RM-40 ; REEL MOTOR
TR-18 ; TAPE TENSION SENSOR

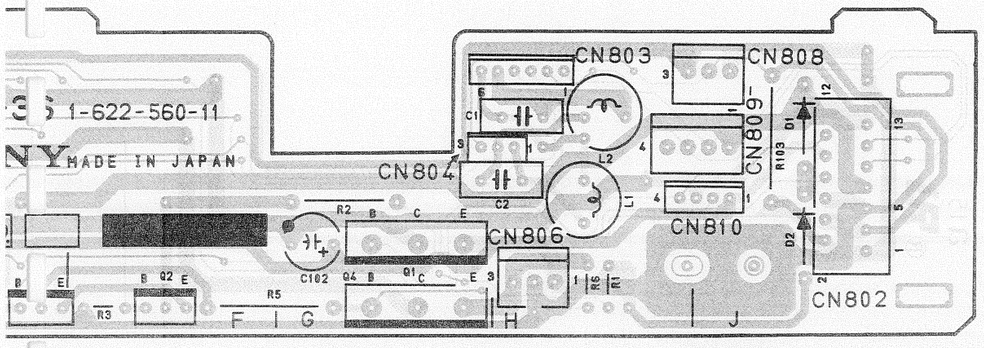


S/N 10001 through 10270

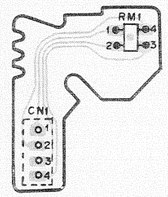


S/N 10271 and higher

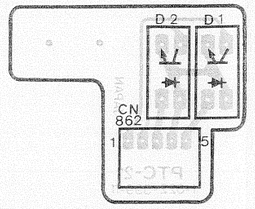




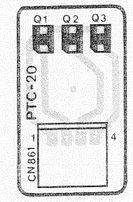
RE-36 — COMPONENT SIDE —
1-622-560-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



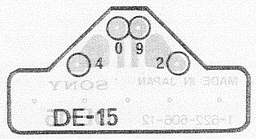
TR-18 — SOLDERING SIDE —
1-611-279-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



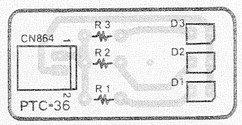
PTC-21 — COMPONENT SIDE —
1-622-599-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



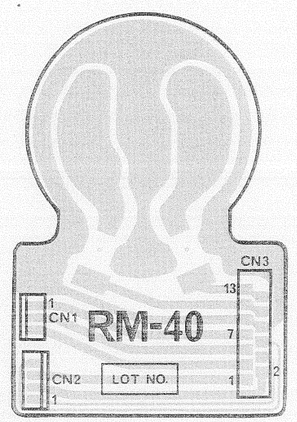
PTC-20 — COMPONENT SIDE —
1-622-598-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



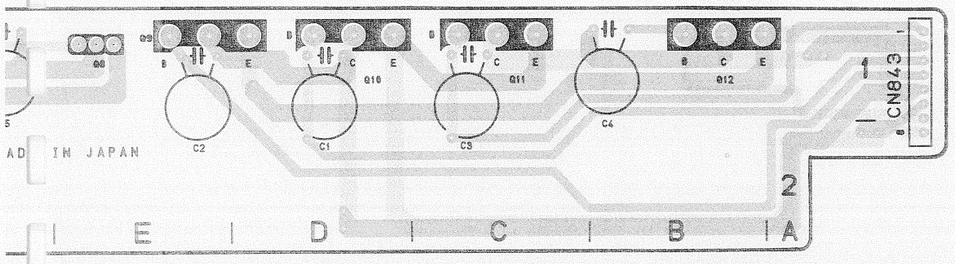
DE-15 — COMPONENT SIDE —
1-622-606-12
BVW-60P BVW-75P
BVW-65P
BVW-70P



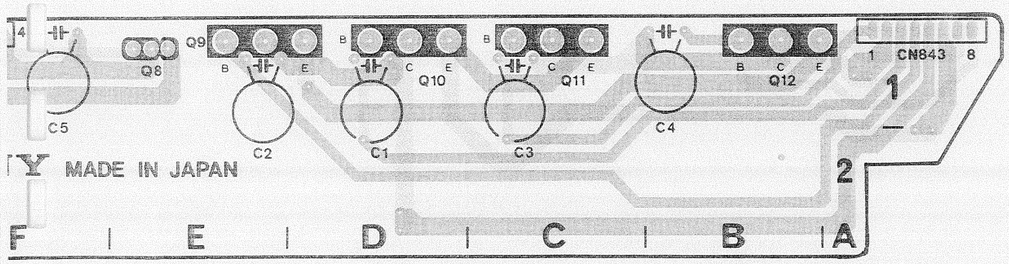
PTC-36 — COMPONENT SIDE —
1-622-601-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



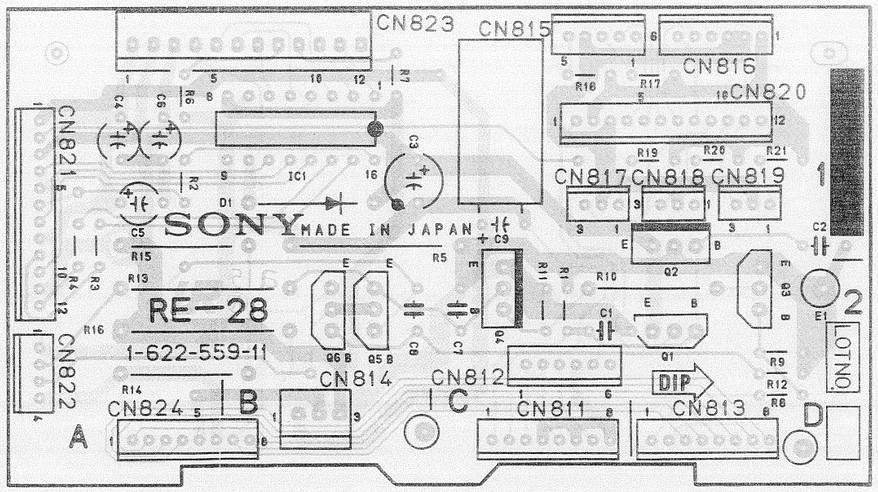
RM-40 — COMPONENT SIDE —
1-622-605-12
BVW-60P BVW-75P
BVW-65P
BVW-70P



DR-56 — SOLDERING SIDE —
1-622-561-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



DR-56 — SOLDERING SIDE —
1-622-561-12
BVW-60P BVW-75P
BVW-65P
BVW-70P



RE-28 — COMPONENT SIDE —
1-622-559-11
BVW-60P BVW-75P
BVW-65P
BVW-70P

SY-61/61A/61B/61C;

SYSTEM CONTROL

SY-61/61A/61B/61C (1-622-577-14)

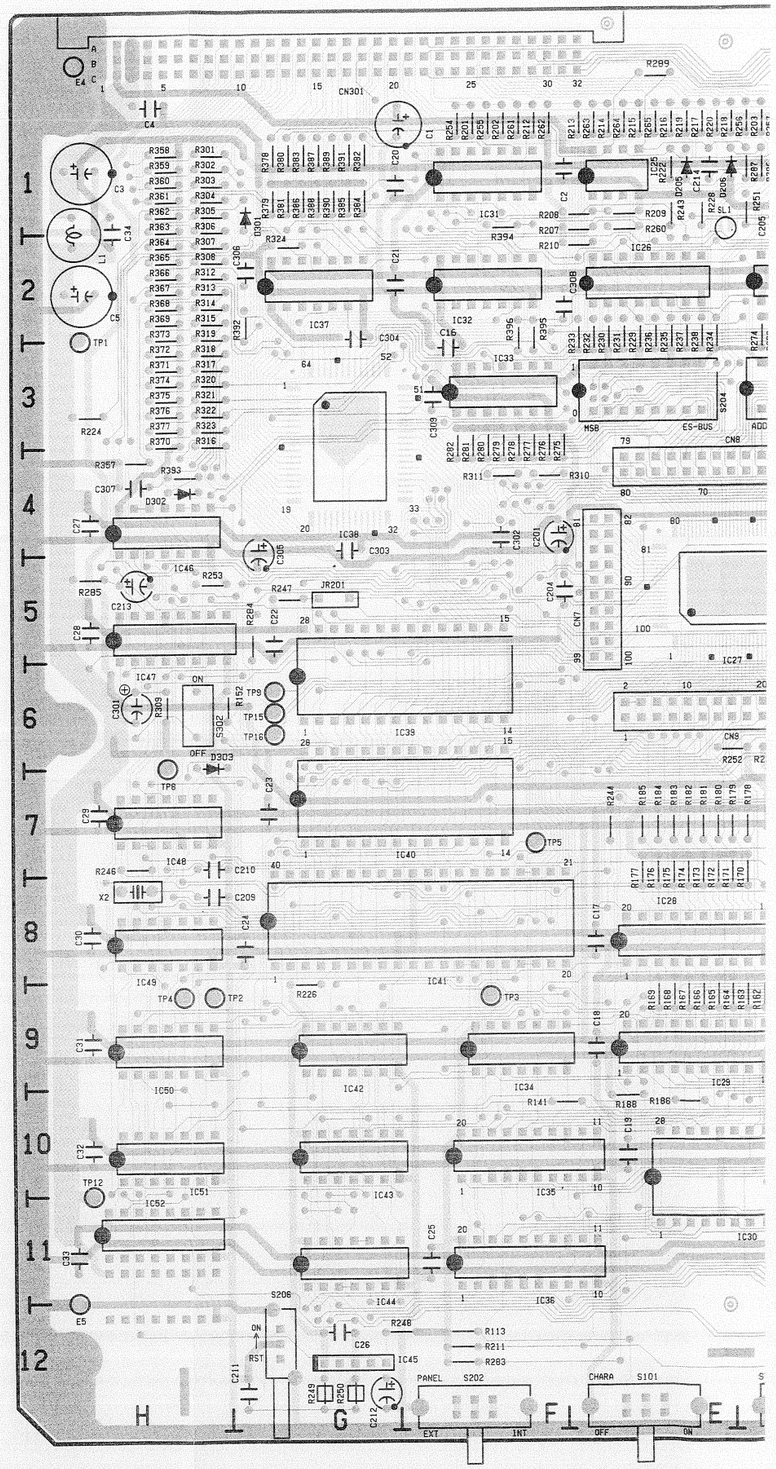
REF.NO.	TYPE	PIN NO. +5V	PIN NO. GND
IC 1	SN74LS244N	20	10
IC 2	SN74LS245N	20	10
IC 3	SN74LS244N	20	10
IC 4	MBM2212-25P	18	8
IC 5	CXK5816PN-12L	24	12
IC 6	MBM27C256-25	28	14
IC 7	TMPZ84C011AF	27.51.90	28.50.77.100
IC 8	TC74HCU04P	14	7
IC 9	M54529AP	1.14	7
IC 10	TC74HC11P	14	7
IC 11	TC74HC138P	16	8
IC 12	TC74HC138P	16	8
IC 13	TC74HC14P	14	7
IC 14	TC4050BP	1	8
IC 15	TC4053BPHB	16	7.8
IC 16	TC74HC595P	16	8
IC 17	TC74HC597P	16	8
IC 18	NJM78L05A	*	3
IC 19	MB88303	22	11
IC 20	AM26LS30PC	1	4.5.8
IC 21	TC74HC157P	16	8
IC 22	TC74HC157P	16	8
IC 23	CXK5816PN-12L	24	12
IC 24	TC74HCU04P	14	7
IC 25	NJM2903D	8	4
IC 26	MC34051P	16	8
IC 27	TMPZ84C011AF	27.51.90	28.50.77.100
IC 28	TC74HC245P	20	10
IC 29	TC74HC245P	20	10
IC 30	LH0082AD	24	5
IC 31	M54529AP	1.14	7
IC 32	M54529AP	1.14	7
IC 33	TC4030BP	14	7
IC 34	TC74HC08P	14	7
IC 35	SN74LS697N	20	10
IC 36	SN74LS697N	20	10
IC 37	M54529AP	1.14	7
IC 38	CXD1095Q	26.58	10.25.42.57
IC 39	MBM27C512-25	28	14
IC 40	CXK5864PN-12L	28	14
IC 41	LH0084A	9	31
IC 42	TC74HC32P	14	7
IC 43	TC74HC32P	14	7
IC 44	TC74HC00P	14	7
IC 45	M51958BL	1	3
IC 46	TC74HC08P	14	7
IC 47	MC14538BCP	16	8
IC 48	μPD4069UBP	14	7
IC 49	MC74HC58N	14	7
IC 50	TC74HC32P	14	7
IC 51	TC74HCU04P	14	7
IC 52	TC74HC139P	14	7
IC 53	TC74HC02P	14	7

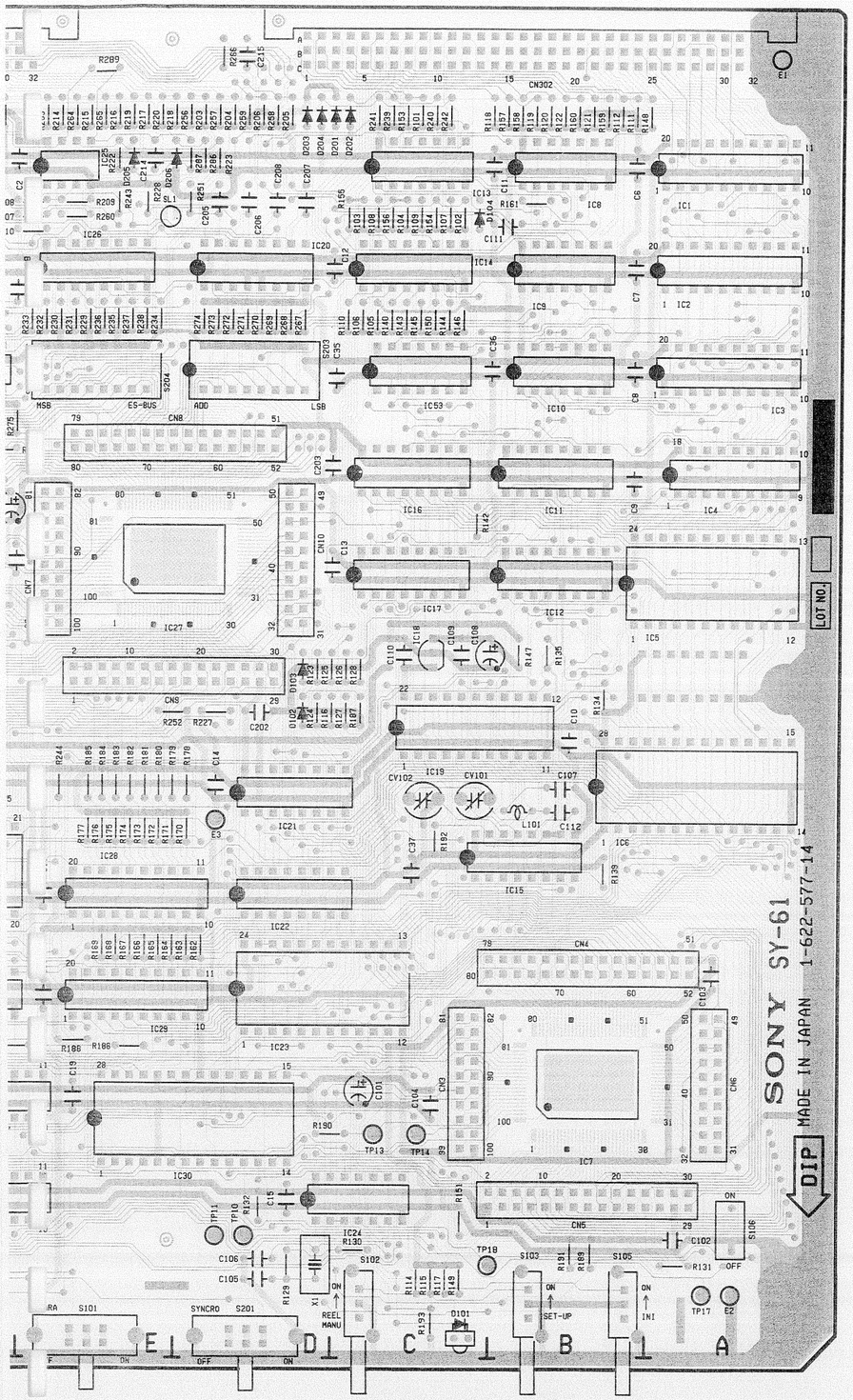
* REFER TO SCHEMATIC

SY-61/61A/61B/61C (1-622-577-14)

CN3	C-10
CN4	B-9
CN5	B-2
CN6	A-10
CN7	E-5
CN8	D-4
CN9	D-6
CN10	D-5
CN301	G-1
CN302	B-1
CV101	C-7
CV102	C-7
D101	C-12
D102	D-6
D103	D-6
D201	C-1
D202	C-1
D203	D-1
D204	D-1
D205	E-1
D206	E-1
D301	G-1
D302	H-4
E1	A-1
E2	A-12
E3	D-7
E4	H-1
E5	H-12
IC1	A-1
IC2	A-2
IC3	A-3
IC4	A-4
IC5	A-5
IC6	A-7
IC7	B-3
IC8	B-1
IC9	B-2
IC10	B-3
IC11	B-4
IC12	B-5
IC13	C-1
IC14	C-2
IC15	B-8
IC16	C-4
IC17	C-5
IC18	C-6
IC19	C-7
IC20	D-2
IC21	D-7
IC22	D-8
IC23	D-8
IC24	C-11
IC25	B-1
IC26	B-2
IC27	D-5
IC28	B-8
IC29	E-9
IC30	D-10
IC31	F-1
IC32	F-2
IC33	F-3
IC34	F-9
IC35	F-10
IC36	F-11
IC37	G-2
IC38	G-4
IC39	F-6
IC40	F-7
IC41	F-8
IC42	G-9
IC43	G-10
IC44	G-11
IC45	G-12
IC46	H-4
IC47	H-5
IC48	H-7
IC49	H-8
IC50	H-9
IC51	H-10
IC52	H-11
IC53	C-3
S101	E-12
S102	C-12
S103	B-12
S105	B-12
S106	A-11
S201	D-12
S202	F-12
S203	D-3
S204	E-3
S206	G-12
S302	H-6
TP1	H-2
TP2	H-9
TP3	F-9
TP4	H-9
TP5	F-7
TP8	H-7
TP9	G-6
TP10	D-11
TP11	D-11
TP12	H-10
TP13	C-11
TP14	C-11
TP15	G-6
TP16	G-6
TP17	A-12
TP18	C-12
X1	D-12
X2	H-8

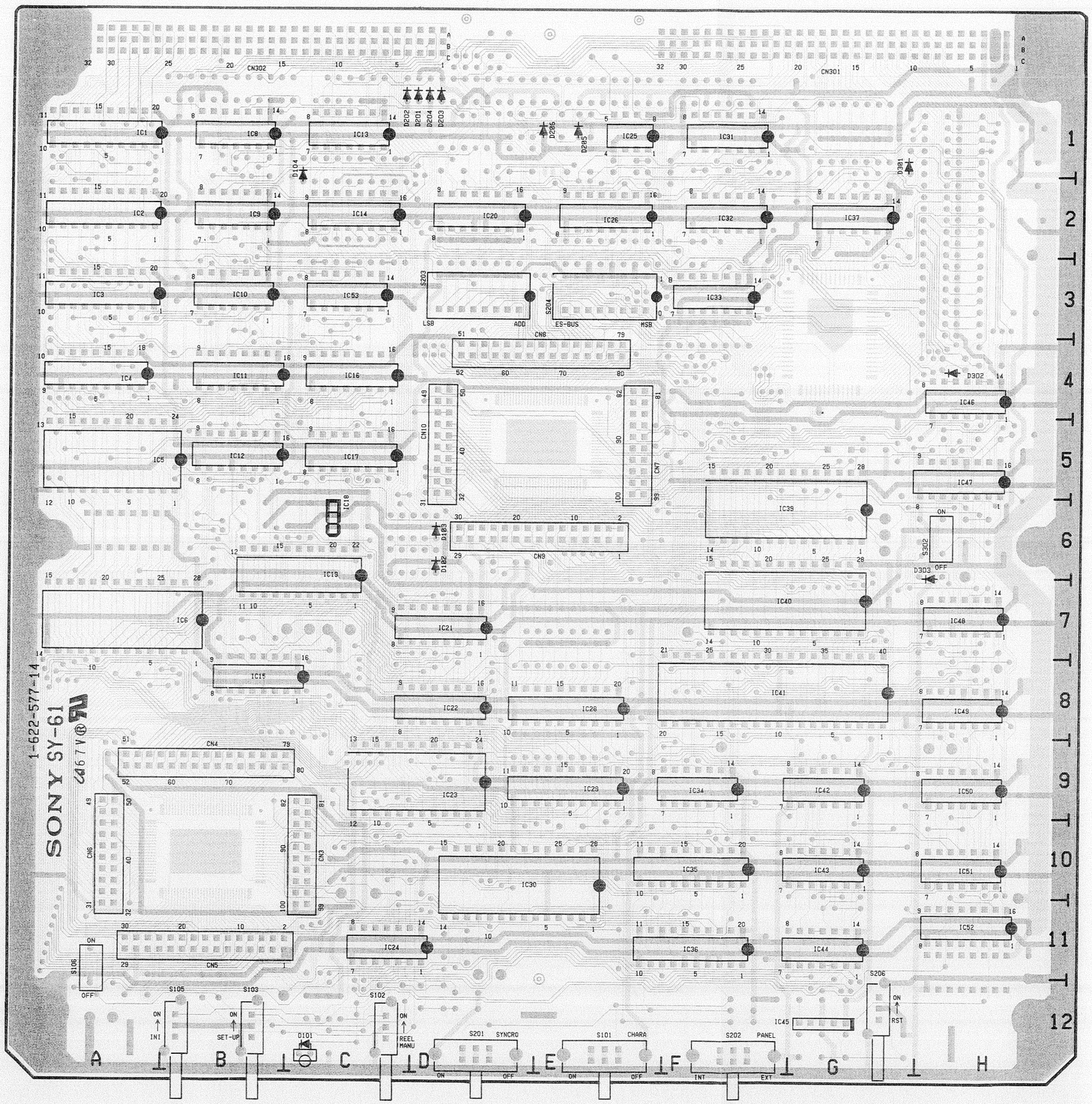
	SY-61	SY-61A	SY-61B	SY-61C
BVW-60P		○		
BVW-65P		○		
BVW-70P	○			
BVW-75P	○			
BVW-95P			○	
BVW-96P				○





SY-61/61A/61B/61C — COMPONENT SIDE —

1-622-577-14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



SY-61/61A/61B/61C — SOLDERING SIDE —

1-622-577-14
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

SY-64AP; SYSTEM CONTROL, TIME CODE READER, TIME BASE IMPACT ERROR CORRECTOR

SY-64AP (1-622-578-21)

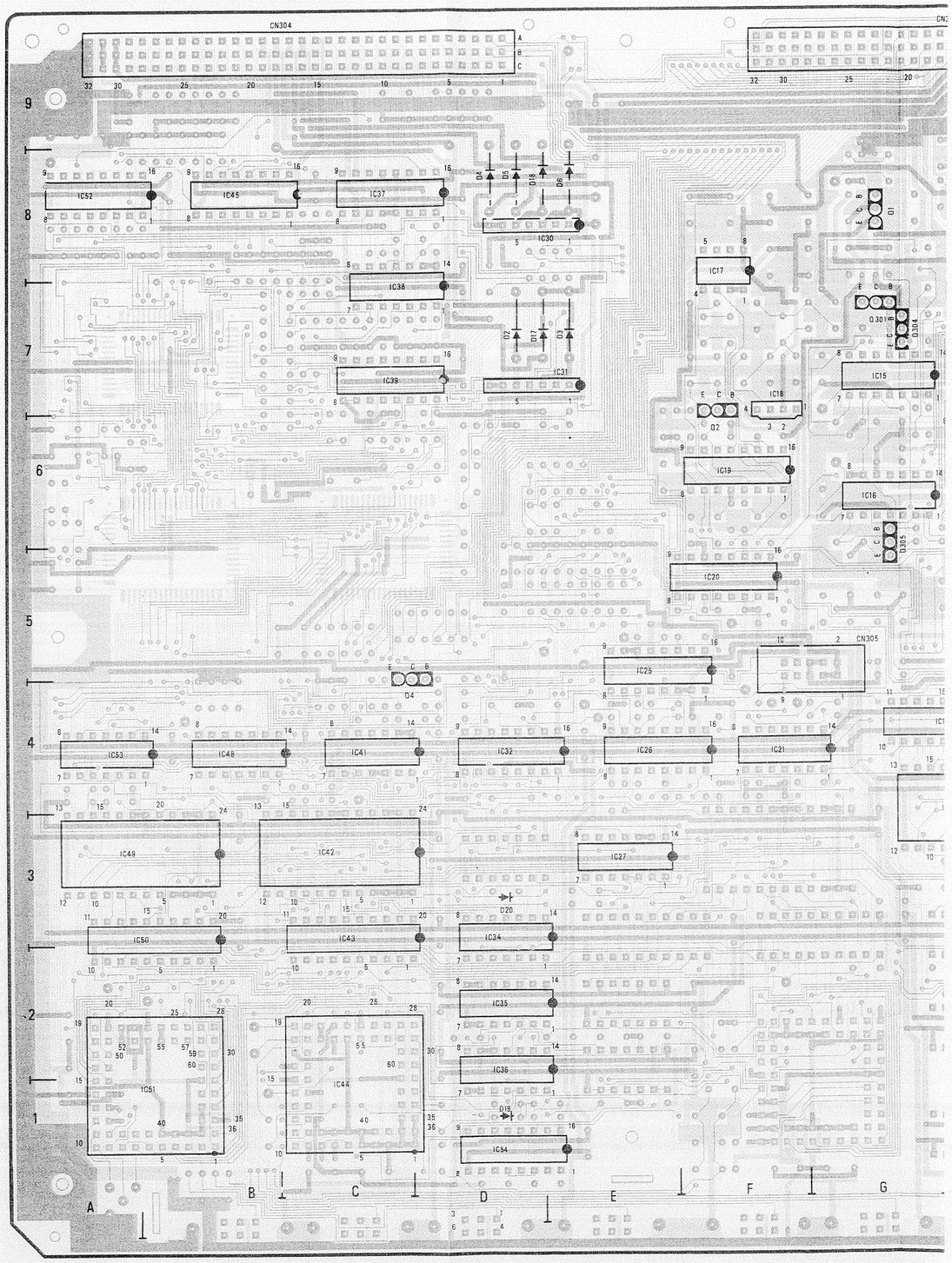
REF.No	TYPE	PIN NO. UNREG +15V	UNREG +14V	+12V	+5V	GND	UNREG GND	−12V
IC 1	BX-343			13		7		
IC 2	LA7205				8	5		
IC 3	LA7205				8	5		
IC 4	μPD78312CW-607				64	32		
IC 5	TL082CP			8				4
*1 IC 6	TC4016BPHB				14	7		
IC 7	TL082CP			8				4
IC 9	TLC548CP				8	4		
IC 10	SN74HC373N				20	10		
IC 11	CXK5816P-12L				24	12		
IC 15	TL084CN			4				11
IC 16	TL084CN			4				11
IC 17	TL082CP			8		4		
IC 18	AN608P			2		4		
IC 19	PA0009			4		6		10
IC 20	SN74LS123N				16	8		
IC 21	TC74HC04P				14	7		
IC 25	SN74LS123N				16	8		
IC 26	TC4050BP			1		8		
IC 27	TC74HC00P				14	7		
IC 30	TA7267P		7			4		
IC 31	TA7267P		7			4		
IC 32	TC4538BP				16	8		
IC 34	TC74HC32P				14	7		
IC 35	TC4001BP				14	7		
IC 36	μPD4013BC				16	8		
IC 37	M54532P	1.8					4.5.12.13	
IC 38	TC74HC08P				14	7		
IC 39	TC74HC4050P				1	8		
IC 40	CXD1095Q				26.58	10.27.42.57		
IC 41	TC74HC08P				14	7		
IC 42	CXK5816P-12L				24	12		
IC 43	TC74HC240P				20	10		
IC 44	CX-7913A				47.61	40.54		
IC 45	M54523P	9					8	
IC 46	CXD1095Q				26.58	10.27.42.57		
IC 47	CXD1095Q				26.58	10.27.42.57		
IC 48	TC74HC04P				14	7		
IC 49	CXK5816P-12L				24	12		
IC 50	TC74HC244P				20	10		
IC 51	CX-7912A				47.61	40.54		
IC 52	TC74HC4050P				1	8		
IC 53	μPD4013BC				14	7		
IC 54	TC74HC4538P				16	8		

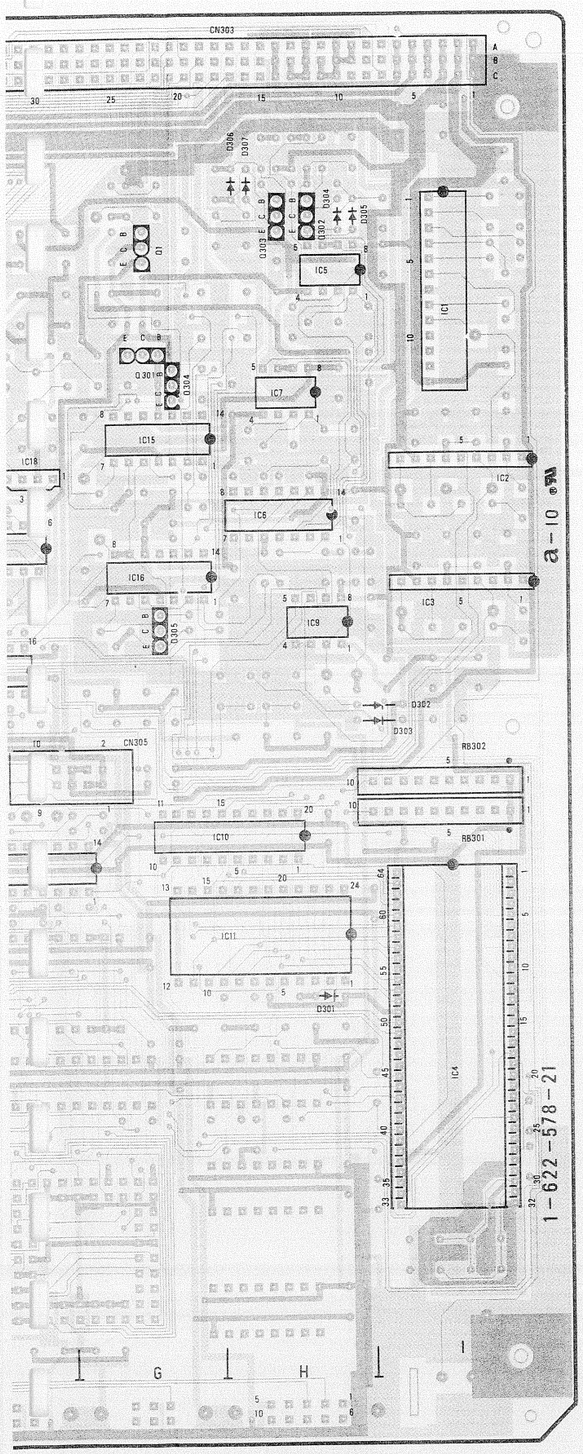
NOTE

MARK	CHANGE INFORMATION	SERIAL NO.
*1	IC6 TC4016BP → TC4016BPHB	S/N 10713 ～

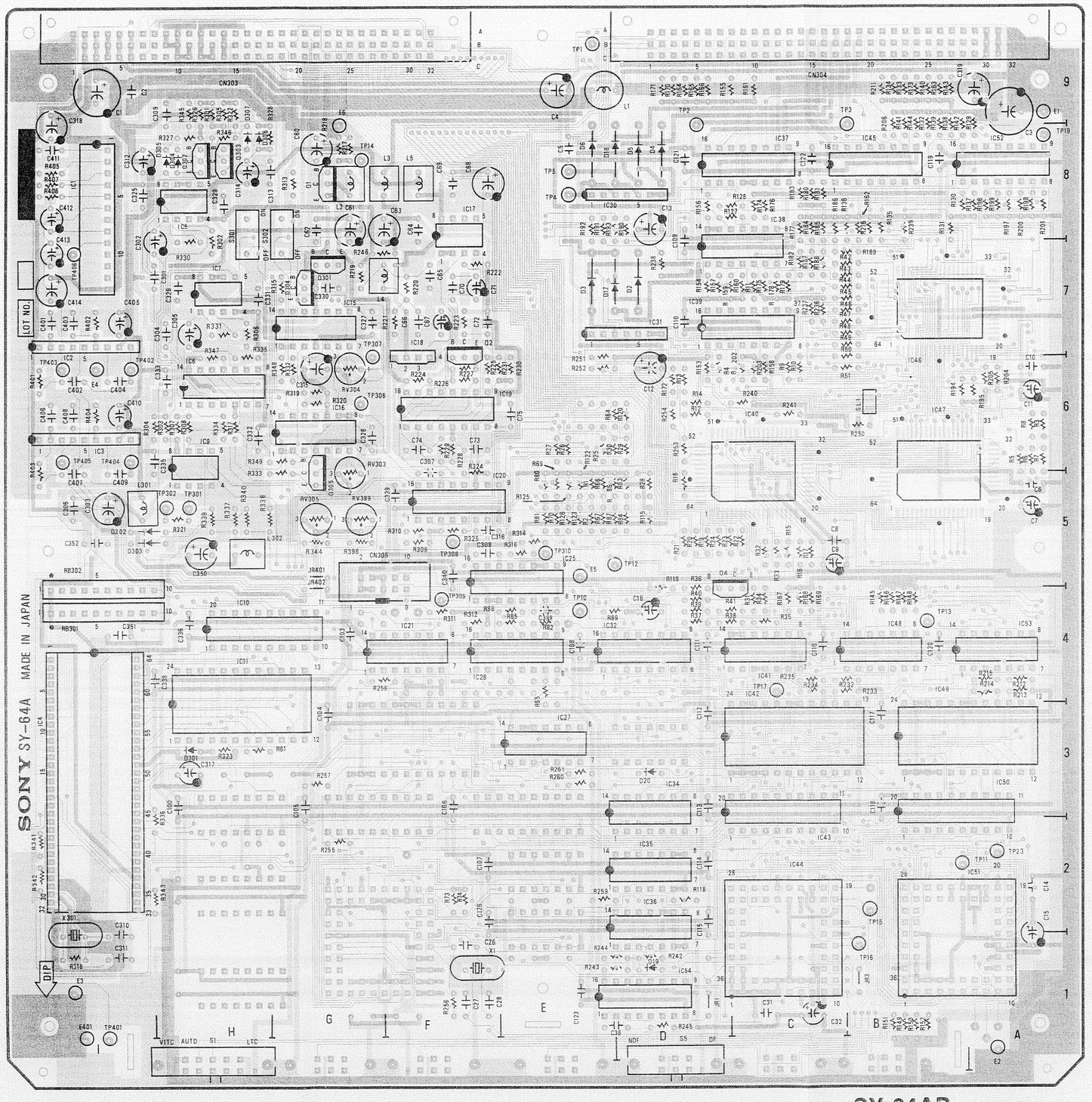
SY-64AP (1-622-578-21)

CN303	H-9	Q1	G-8
CN304	C-9	Q2	F-7
CN305	F-5	Q4	C-4
		Q301	G-7
D2	D-7	Q302	H-8
D3	E-7	Q303	H-8
D4	D-8	Q304	G-7
D5	D-8	Q305	G-5
D6	E-8		
D17	D-7	RV303	G-5
D18	D-8	RV304	G-6
D19	D-1	RV305	G-5
D20	D-3	RV399	G-5
D301	H-3		
D302	I-5	S1	H-1
D303	I-5	S5	D-1
D304	H-8	S301	H-8
D305	H-8	S302	G-8
D306	H-8		
D307	H-8	SL1	B-6
E1	A-9	TP1	E-9
E2	A-1	TP2	D-9
E3	I-1	TP3	B-9
E4	I-6	TP4	E-8
E5	E-5	TP5	E-8
E6	G-8	TP10	E-4
E401	I-1	TP11	B-2
		TP12	D-5
IC1	I-8	TP13	B-4
IC2	I-7	TP14	G-8
IC3	I-6	TP15	B-2
IC4	I-3	TP16	B-1
IC5	H-8	TP17	C-4
IC6	H-6	TP19	A-8
IC7	H-7	TP23	A-2
IC9	H-6	TP301	H-5
IC10	H-4	TP302	H-5
IC11	H-4	TP306	G-6
IC15	G-7	TP307	G-7
IC16	G-6	TP308	F-5
IC17	F-8	TP309	F-4
IC18	F-7	TP310	E-5
IC19	F-6	TP401	I-1
IC20	F-5	TP402	I-6
IC21	F-4	TP403	I-6
IC25	E-5	TP404	I-6
IC26	E-4	TP405	I-6
IC27	E-3	TP406	I-7
IC30	D-8		
IC31	D-7	X1	F-1
IC32	D-4	X301	I-1
IC34	D-3		
IC35	D-2		
IC36	D-2		
IC37	C-8		
IC38	C-7		
IC39	C-7		
IC40	C-6		
IC41	C-4		
IC42	C-3		
IC43	C-3		
IC44	C-2		
IC45	B-8		
IC46	B-7		
IC47	B-6		
IC48	B-4		
IC49	B-3		
IC50	A-3		
IC51	B-1		
IC52	A-8		
IC53	A-4		
IC54	D-1		





SY-64AP — COMPONENT SIDE —
1-622-578-21
BVW-60P BVW-95P
BVW-65P



SY-64AP — SOLDERING SIDE —
1-622-578-21
BVW-60P BVW-95P
BVW-65P

KY-96B/96C/107/107A, DP-71A, PTC-32, PT-9

KY-96B/96C (1-622-553-12)

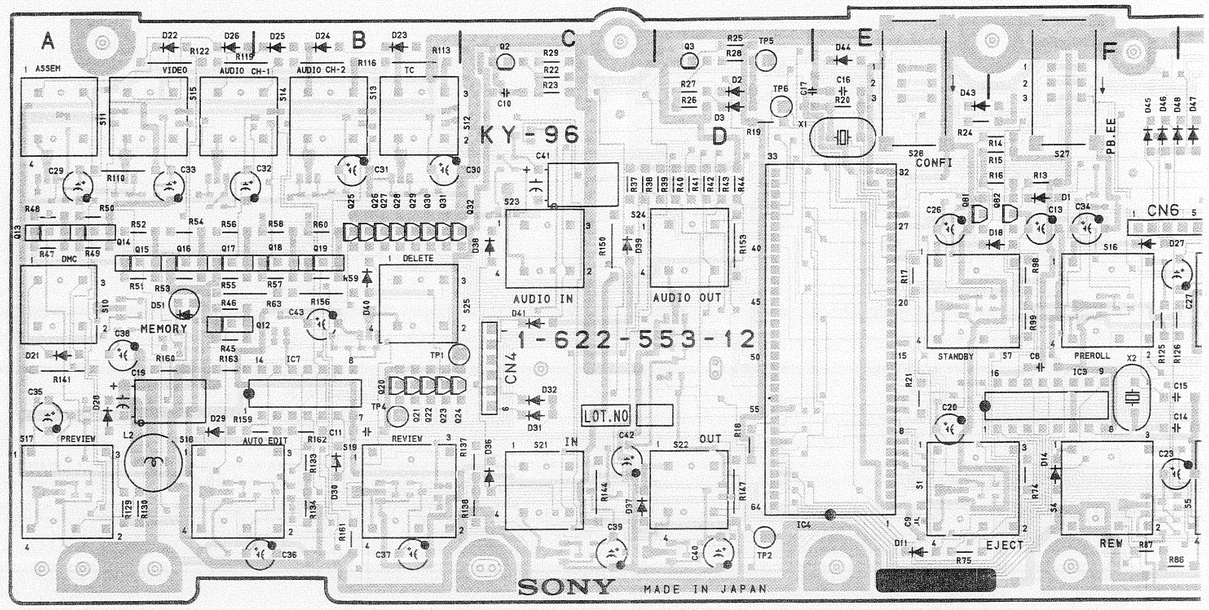
REF.NO	TYPE	PIN NO.		
		+9V	+5V	GND
IC 1	M5236L	*	*	2
IC 2	NJM78L05A	1		3
IC 3	MB88201H-539N		16	8
IC 4	M50747H-601SP			27
IC 5	M54516P	*	*	7
IC 6	M54516P	*	*	7
IC 7	M54516P	*	*	7
IC 8	NJM78L05A	*	*	3

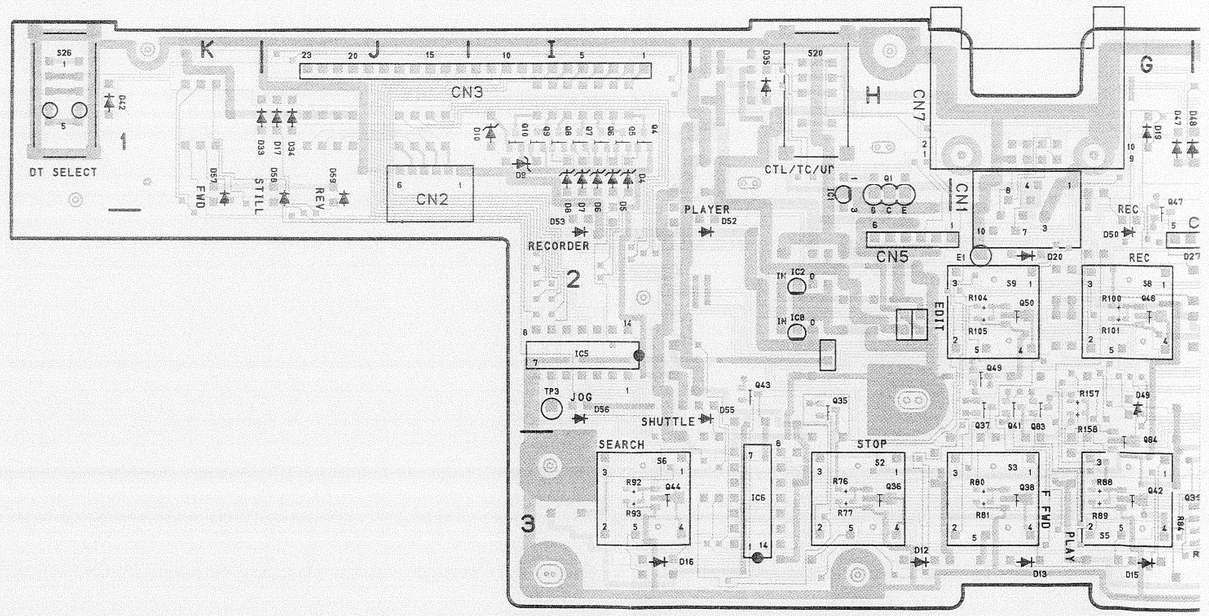
* REFER TO SCHEMATIC

KY-96B/96C (1-622-553-12)

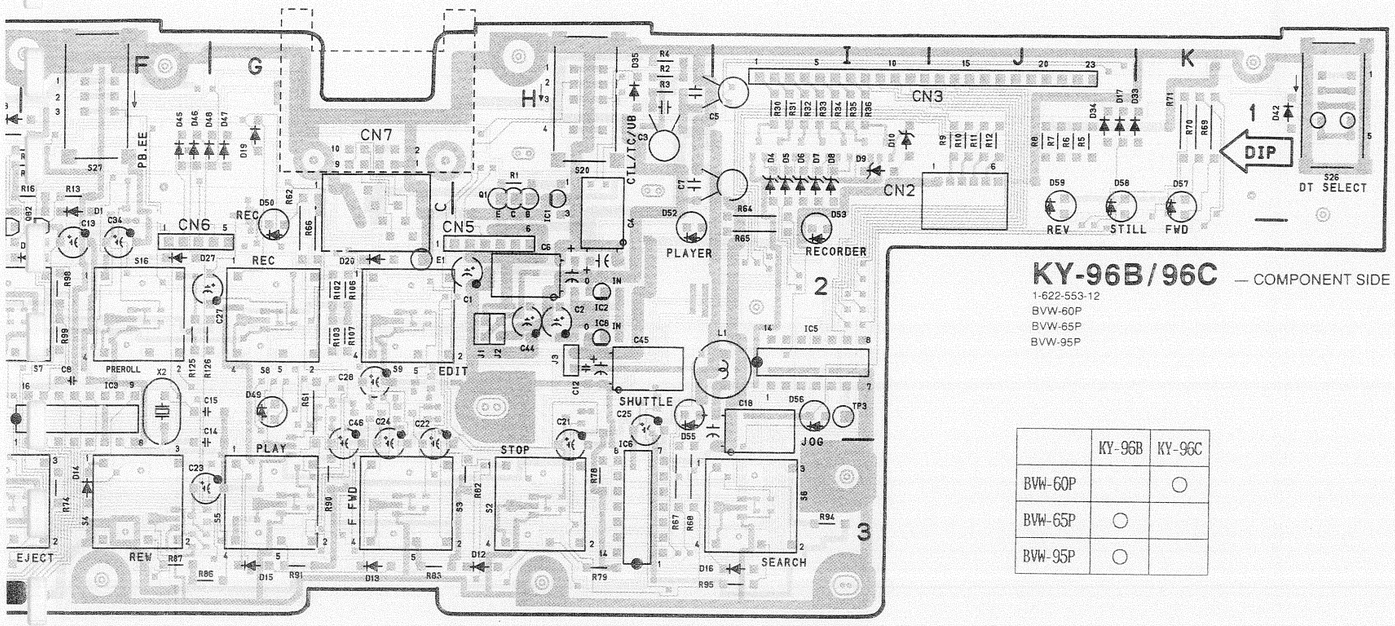
CN1	G-1	D48	F-1	Q34	E-3	S1	E-3
CN2	J-1	D49	G-2	Q35	H-2	S2	H-3
CN3	I-1	D50	G-2	Q36	H-3	S3	G-3
CN4	C-2	D51	A-2	Q37	G-2	S4	F-3
CN5	H-2	D52	H-2	Q38	G-3	S5	G-3
CN6	F-2	D53	I-2	Q39	F-3	S6	I-3
CN7	G-1	D55	H-2	Q40	F-3	S7	E-2
		D56	I-2	Q41	G-2	S8	G-2
D1	F-1	D57	K-1	Q42	G-3	S9	G-2
D2	D-1	D58	J-1	Q43	H-2	S10	A-2
D3	D-1	D59	J-1	Q44	I-3	S11	A-1
D4	I-1			Q45	E-2	S12	B-1
D5	I-1	E1	G-2	Q46	E-2	S13	B-1
D6	I-1			Q47	G-1	S14	A-1
D7	I-1	IC1	H-1	Q48	G-2	S15	A-1
D8	I-1	IC2	H-2	Q49	G-2	S16	F-2
D9	I-1	IC3	F-2	Q50	G-2	S17	A-3
D10	I-1	IC4	E-2	Q51	A-1	S18	A-3
D11	E-3	IC5	I-2	Q52	A-1	S19	B-3
D12	H-3	IC6	H-3	Q53	B-1	S20	H-1
D13	G-3	IC7	B-2	Q54	B-1	S21	C-3
D14	F-3	IC8	H-2	Q55	B-1	S22	D-3
D15	G-3			Q56	B-1	S23	C-2
D16	I-3	Q1	H-1	Q57	B-1	S24	D-2
D17	J-1	Q2	C-1	Q58	A-1	S25	B-2
D18	F-2	Q3	D-1	Q59	A-1	S26	K-1
D19	G-1	Q4	I-1	Q60	A-1	S27	F-1
D20	G-2	Q5	I-1	Q61	F-1	S28	E-1
D21	A-2	Q6	I-1	Q62	F-2		
D22	A-1	Q7	I-1	Q63	A-2	TP1	B-2
D23	B-1	Q8	I-1	Q64	A-3	TP2	D-3
D24	B-1	Q9	I-1	Q65	B-3	TP3	I-2
D25	B-1	Q10	I-1	Q66	A-3	TP4	B-2
D26	A-1	Q12	A-2	Q67	B-3	TP5	D-1
D27	F-2	Q13	A-2	Q68	B-3	TP6	D-1
D28	A-2	Q14	A-2	Q69	A-2		
D29	A-3	Q15	A-2	Q70	A-2	X1	E-1
D30	B-3	Q16	A-2	Q71	C-3	X2	F-2
D31	C-2	Q17	A-2	Q72	C-3		
D32	C-2	Q18	B-2	Q73	D-3		
D33	J-1	Q19	B-2	Q74	D-3		
D34	J-1	Q20	B-2	Q75	C-1		
D35	H-1	Q21	B-2	Q76	C-1		
D36	C-3	Q22	B-2	Q77	D-2		
D37	C-3	Q23	B-2	Q78	D-2		
D38	C-2	Q24	C-2	Q79	B-2		
D39	C-2	Q25	B-2	Q80	B-2		
D40	B-2	Q26	B-2	Q81	E-2		
D41	C-2	Q27	B-2	Q82	F-2		
D42	K-1	Q28	B-2	Q83	G-2		
D43	E-1	Q29	B-2	Q84	G-3		
D44	E-1	Q30	B-2				
D45	F-1	Q31	B-2				
D46	F-1	Q32	C-2				
D47	G-1	Q33	E-2				

KY-96B/96C; KEY BOARD
KY-107/107A; KEY BOARD
DP-71A; TIME COUNTER DISPLAY
PTC-32; SEARCH DIAL
PT-9; POWER TRANSISTOR



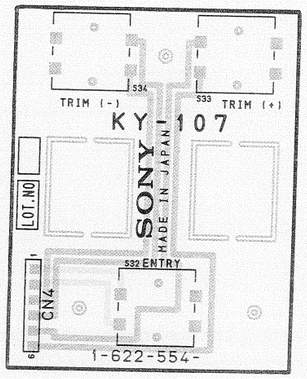


KY-96B/96C/107/107A, DP-71A, PTC-32, PT-9



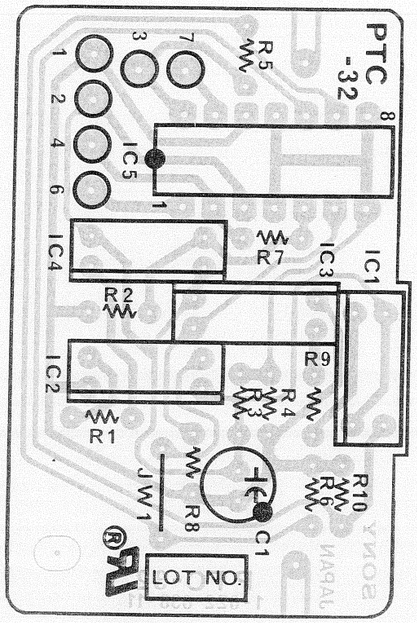
KY-96B/96C — COMPONENT SIDE —
1-622-553-12
BVW-60P
BVW-65P
BVW-95P

	KY-96B	KY-96C
BVW-60P		○
BVW-65P	○	
BVW-95P	○	

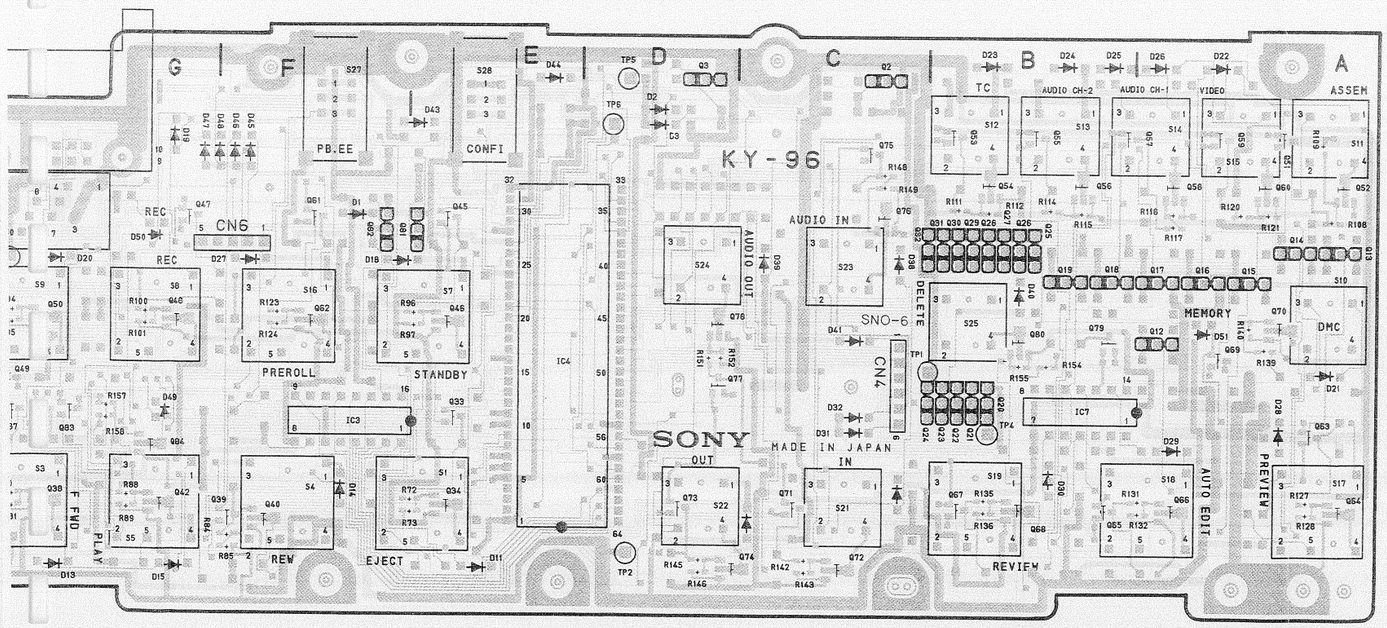


KY-107/107A — COMPONENT SIDE —
1-622-554-11
BVW-60P
BVW-65P
BVW-95P

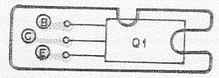
	KY-107	KY-107A
BVW-60P		○
BVW-65P	○	
BVW-95P	○	



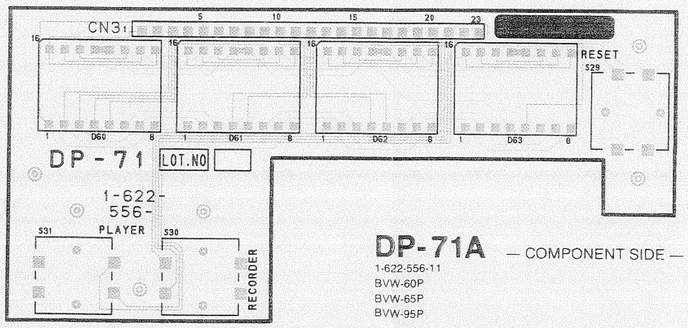
PTC-32 — COMPONENT SIDE —
1-622-638-11
BVW-60P
BVW-65P
BVW-95P



KY-96B/96C — SOLDERING SIDE —
1-622-553-12
BVW-60P
BVW-65P
BVW-95P



PT-9 — SOLDERING SIDE —
1-605-018-11
BVW-60P
BVW-65P
BVW-95P



DP-71A — COMPONENT SIDE —
1-622-556-11
BVW-60P
BVW-65P
BVW-95P

TC-40AP; LTC PB AMPLIFIER

S/N 10001 through 10455

TC-40AP (1-622-579-22)

REF.No	TYPE	PIN NO.				
		+12V	+5V	GND	−5V	−12V
IC 204	NJM2903M		8			
IC 205	TC4052BF		16	8	7	
IC 206	TL082CPS	8		4		
IC 208	NJM4558M		8		4	
IC 209	TC4053BF		16	8		
IC 210	NJM4558M		8		4	
IC 211	NJM4562D-D		8		4	
IC 212	TC4538BF		16	8		
IC 213	TC4028BF		16	8		
IC 214	TC4075BF		16	8		
IC 215	NJM4556D	8				4

* REFER TO SCHEMATIC

TC-40AP (1-622-579-22)

CN205 I-3

D206 D-4
D207 E-1

E201 E-5
E301 C-3

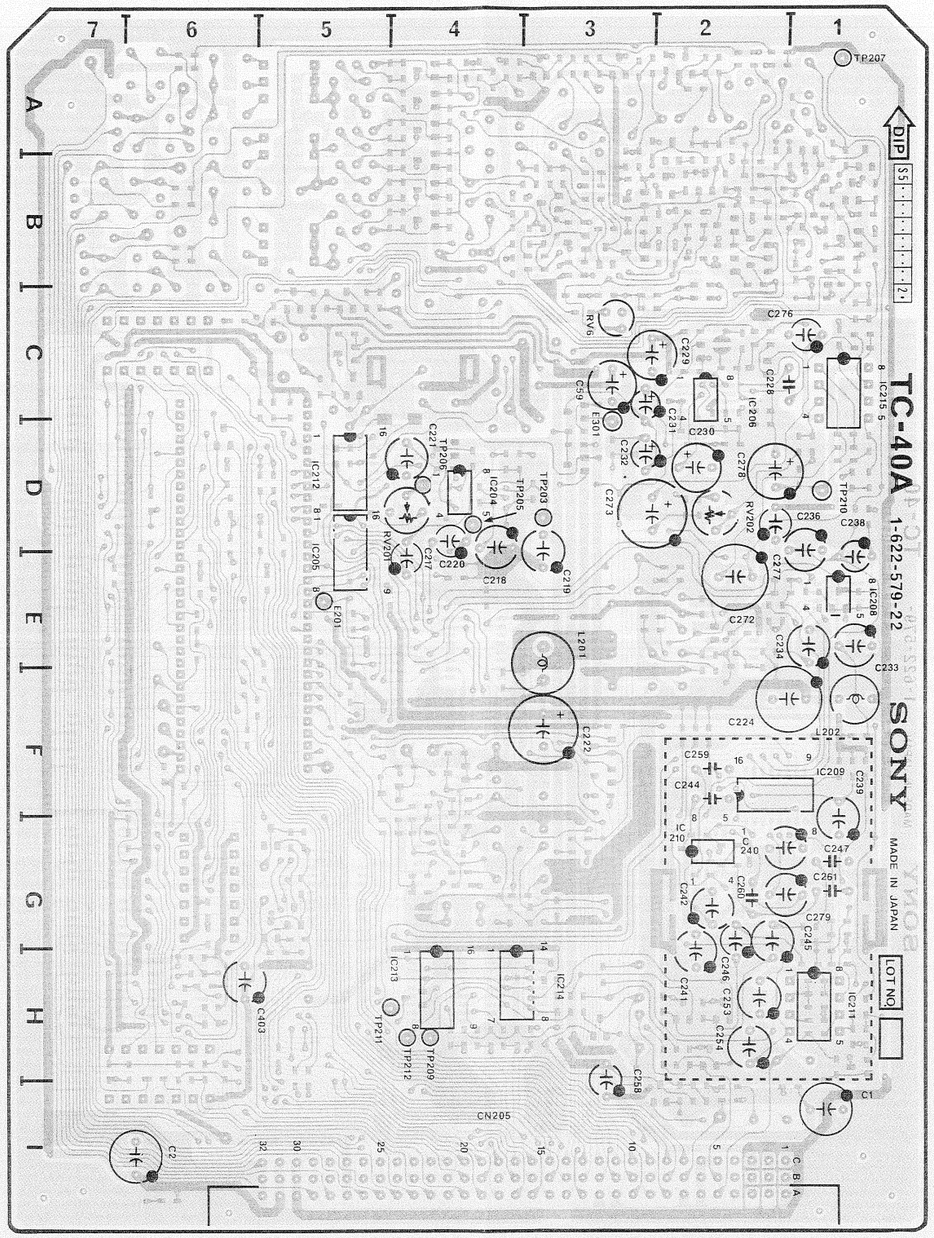
IC204 D-4
IC205 D-5
IC206 C-2
IC208 E-1
IC209 F-2
IC210 G-2
IC211 H-1
IC212 D-5
IC213 H-4
IC214 H-4
IC215 C-1

Q209 H-2
Q210 H-2
Q211 C-2
Q212 C-3
Q213 C-2
Q214 D-3
Q215 H-3
Q216 H-4

RV6 C-3
RV201 D-4
RV202 D-2

SL202 C-2

TP203 D-3
TP205 D-4
TP206 D-4
TP207 A-1
TP209 H-4
TP210 D-1
TP211 H-4
TP212 H-4



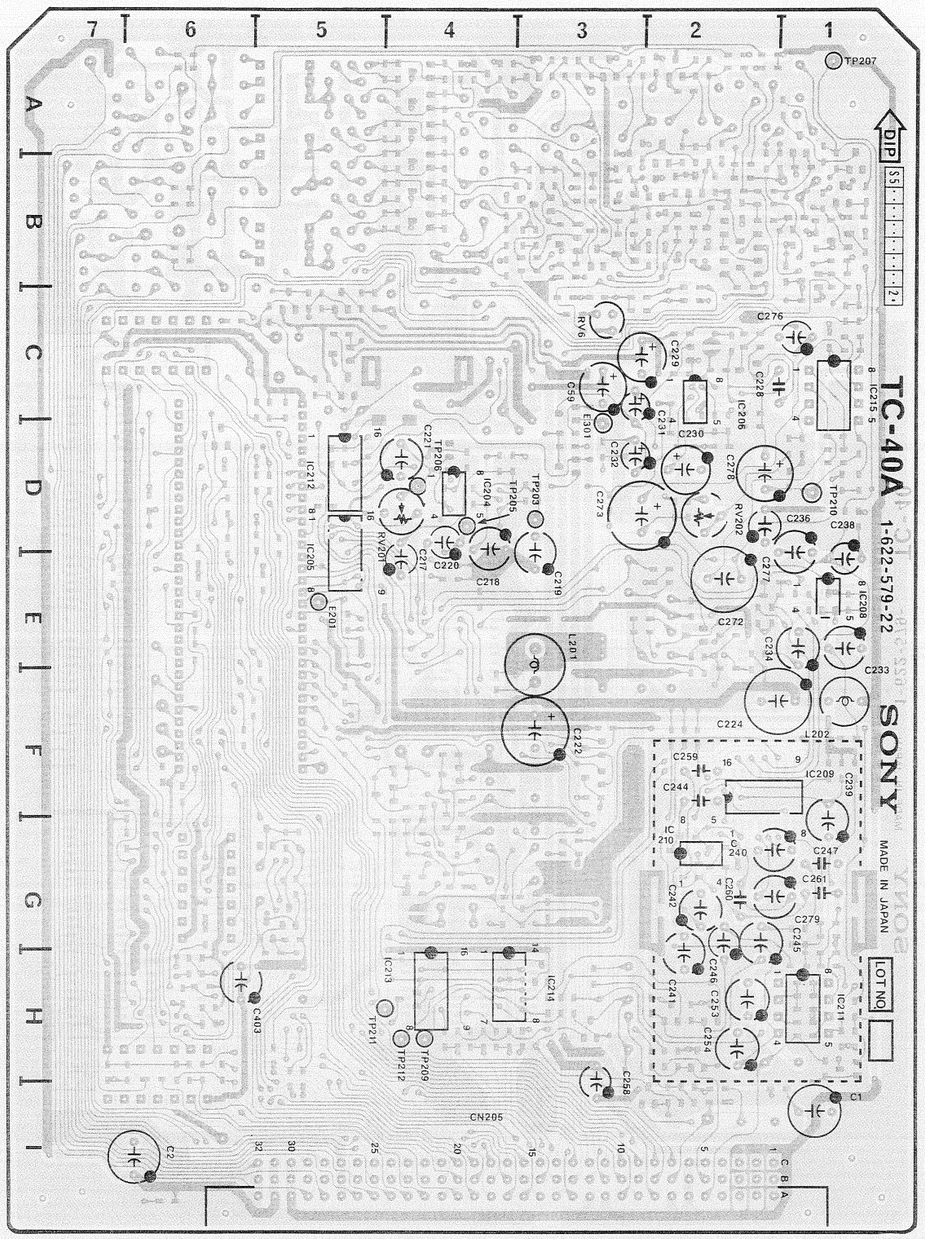
TC-40AP — COMPONENT SIDE —
1-622-579-22
BVW-60P
BVW-65P
BVW-95P

TC-40A 1-622-579-22 MADE IN JAPAN SONY

TC-40AP; LTC PB AMPLIFIER

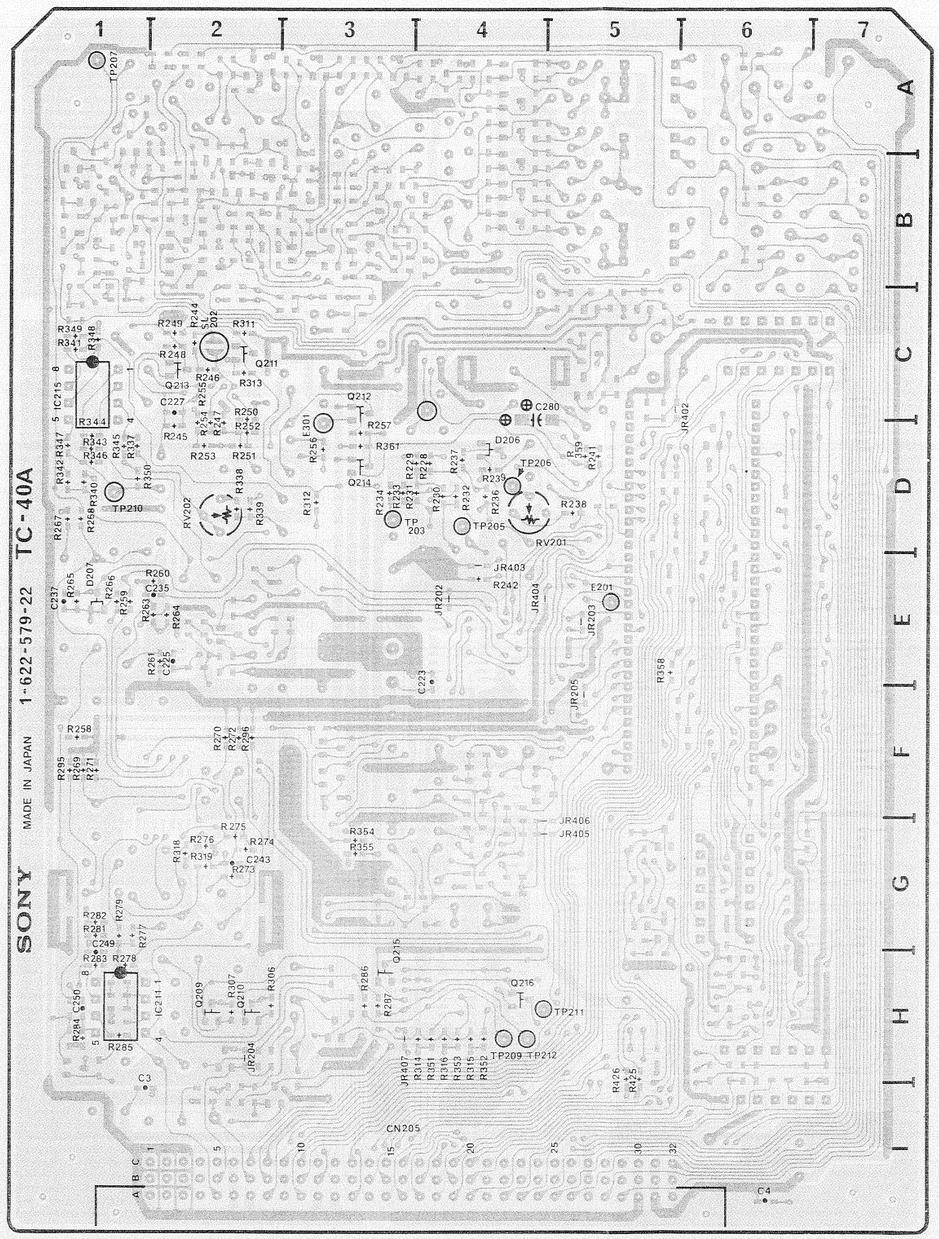
S/N 10001 through 10455

-579-22)



TC-40AP — COMPONENT SIDE —

1-622-579-22
BVW-60P
BVW-65P
BVW-95P



TC-40AP — SOLDERING SIDE —

1-622-579-22
BVW-60P
BVW-65P
BVW-95P

TC-40AP; LTC PB AMPLIFIER

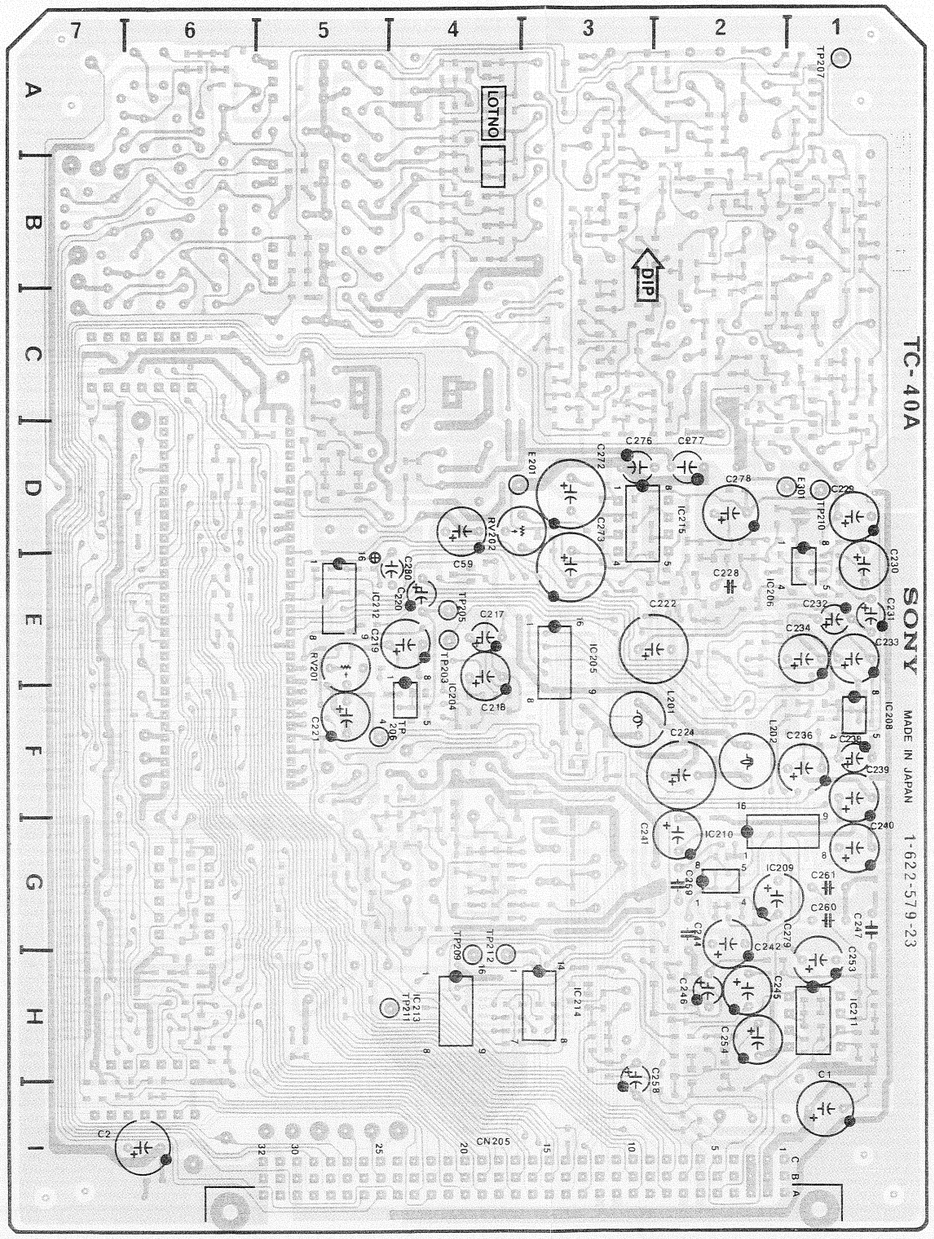
S/N 10456 and higher

TC-40AP (1-622-579-23)

REF.No.	TYPE	PIN NO.				
		+12V	+5V	GND	−5V	−12V
IC 204	NJM2903M		8			
IC 205	TC4052BF		16	8	7	
IC 206	NJM082M	8		4		
IC 208	NJM4558M		8		4	
IC 209	TC4053BF		16	8		
IC 210	NJM4558M		8		4	
IC 211	NJM4562D-D		8		4	
IC 212	TC4538BF		16	8		
IC 213	TC4028BF		16	8		
IC 214	TC4075BF		16	8		
IC 215	NJM4556D	8				4

TC-40AP (1-622-579-23)

CN205	I-4
D206	E-4
D207	F-1
E201	D-3
E301	D-1
IC204	F-4
IC205	E-3
IC206	E-1
IC208	F-1
IC209	G-2
IC210	G-2
IC211	H-1
IC212	E-5
IC213	H-4
IC214	H-3
IC215	D-3
Q209	H-2
Q210	H-2
Q211	E-2
Q212	E-1
Q213	D-2
Q214	E-4
Q215	E-2
RV201	E-5
RV202	D-3
SL202	D-1
TP203	E-4
TP205	E-4
TP206	F-5
TP207	A-1
TP209	H-4
TP210	D-1
TP211	H-4
TP212	H-4

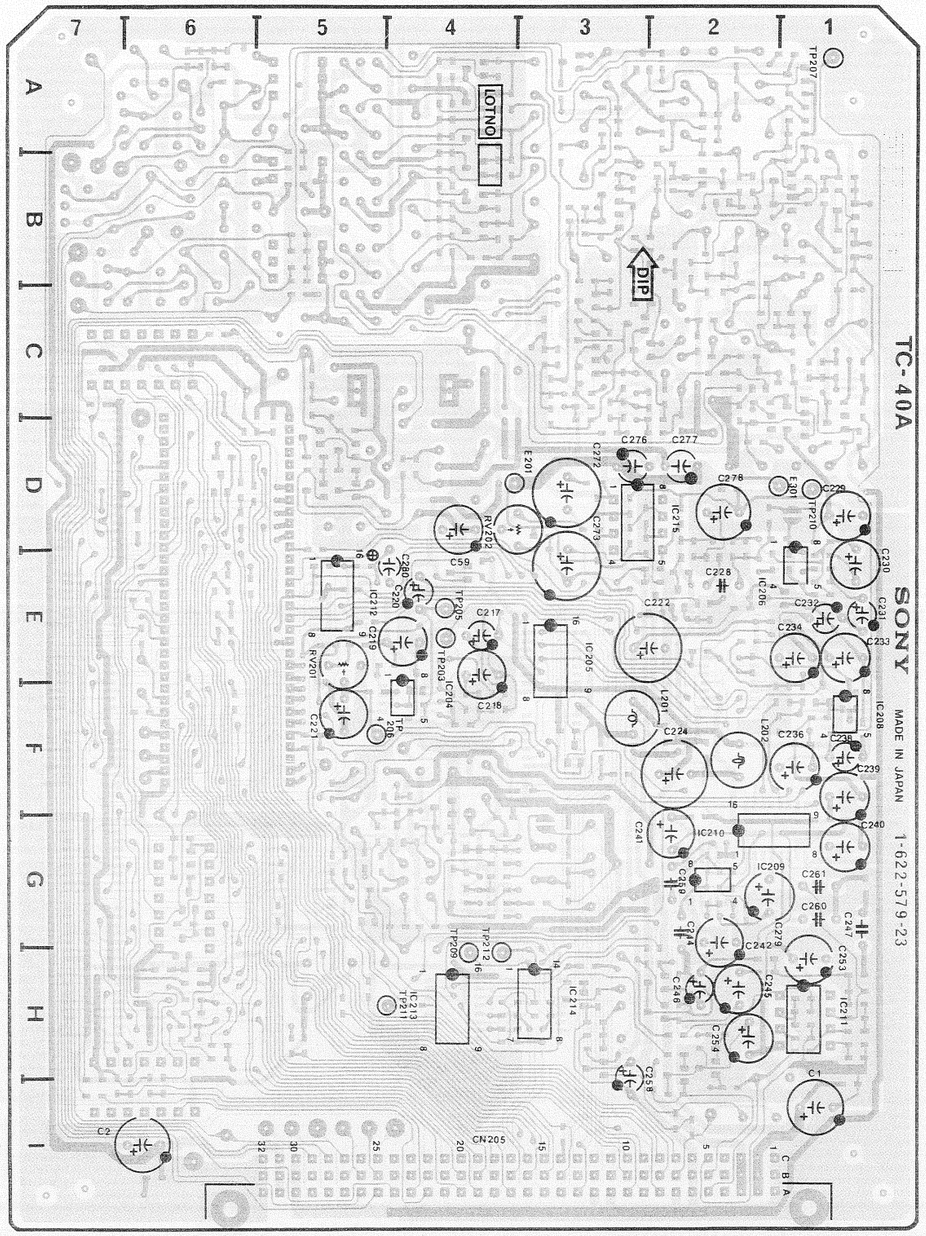


TC-40AP —COMPONENT SIDE—
1-622-579-23
BVW-60P
BVW-65P
BVW-95P

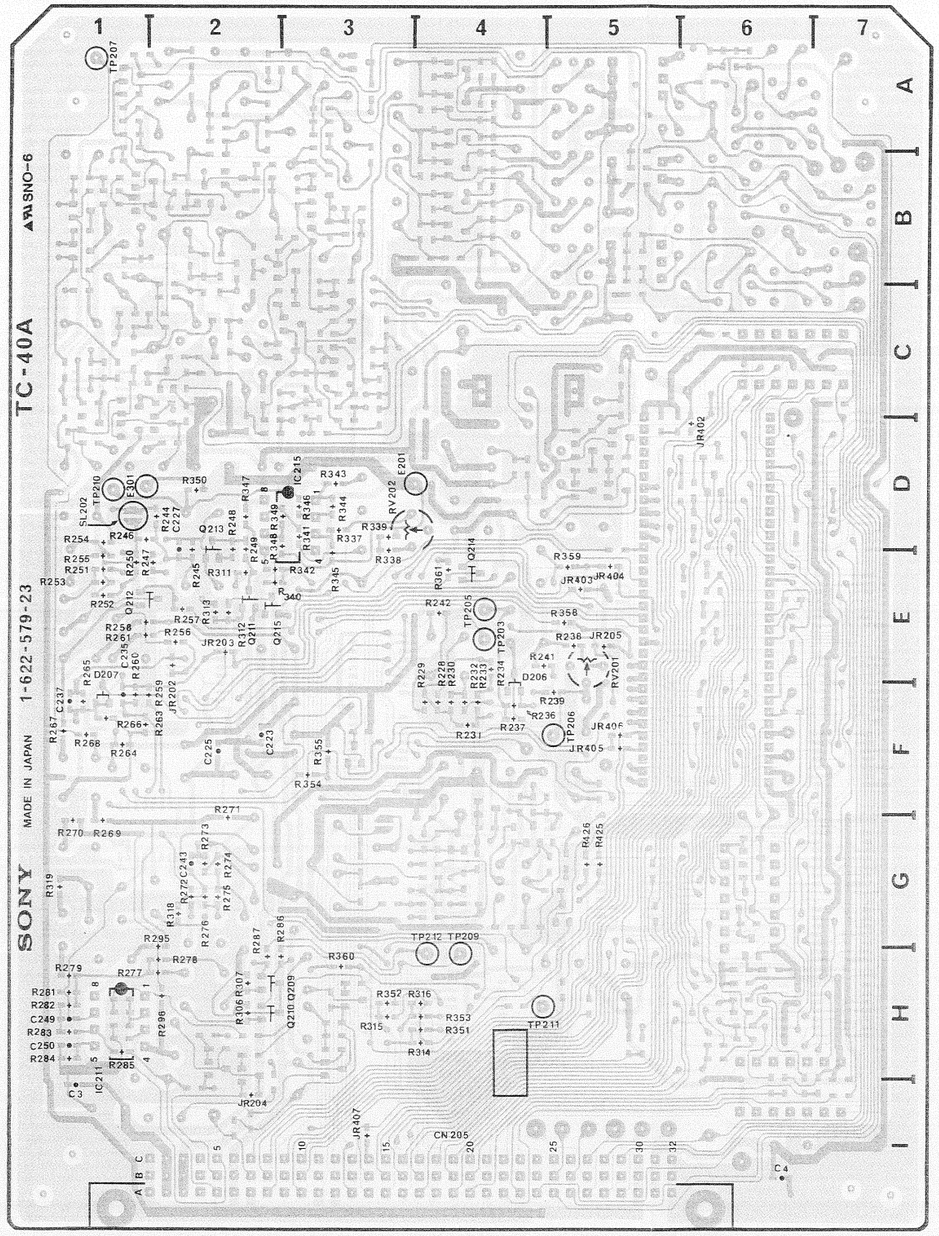
TC-40A
SONY
MADE IN JAPAN
1-622-579-23
▲SNO-6

TC-40AP; LTC PB AMPLIFIER

S/N 10456 and higher



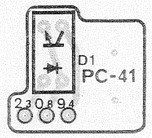
TC-40AP —COMPONENT SIDE—
1-622-579-23
BVW-60P
BVW-65P
BVW-95P



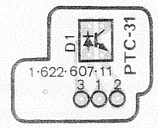
TC-40AP —SOLDERING SIDE—
1-622-579-23
BVW-60P
BVW-65P
BVW-95P

SE-57, PTC-31/15, PD-35, RM-57, CL-14/24, CCM-2, PC-32/33/41/47, HC11

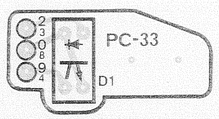
SE-57 ; THREADING MOTOR CONTROL
PTC-31 ; THREADING MOTOR FG
PTC-15 ; THREAD/UNTHREAD END SENSOR
PD-35 ; PINCH/CLEANING SOLENOID
RM-57 ; REMOTE CONNECTOR
CL-14 ; CASSETTE-UP COMPARTMENT
CL-24 ; CASSETTE-UP COMPATRMENT LED
CCM-2 ; UP/DOWN MOTOR
PC-32/47 ; LARGE/SMALL CASSETTE DETECTOR
PC-33 ; CASSETTE DOWN DETECTOR
PC-41 ; CASSETTE IN DETECTOR
HC-11 ; HOURS METER



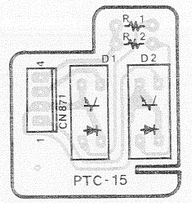
PC-41 — COMPONENT SIDE —
1-623-267-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



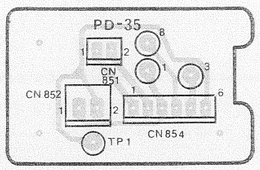
PTC-31 — COMPONENT SIDE —
1-622-607-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



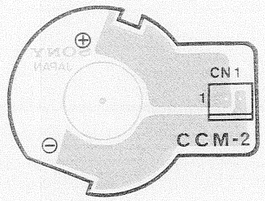
PC-33 — COMPONENT SIDE —
1-622-604-12
BVW-60P BVW-75P
BVW-65P
BVW-70P



PTC-15 — COMPONENT SIDE —
1-622-597-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



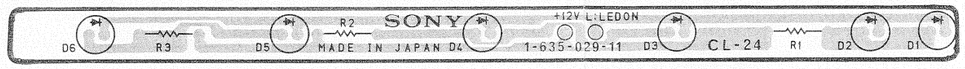
PD-35 — COMPONENT SIDE —
1-622-596-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



CCM-2 — COMPONENT SIDE —
1-623-198-11
BVW-60P BVW-75P
BVW-65P
BVW-70P

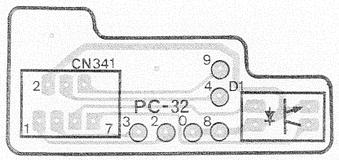
SE-57, PTC-31/15, PD-35, RM-57, CL-14/24, CCM-2, PC-32/33/41/47, HC11

S/N 11083 and higher



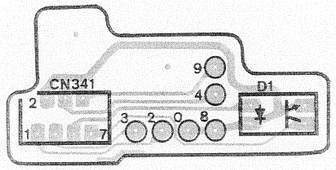
CL-24 — COMPONENT SIDE —
1-635-029-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

S/N 10001 through 10170

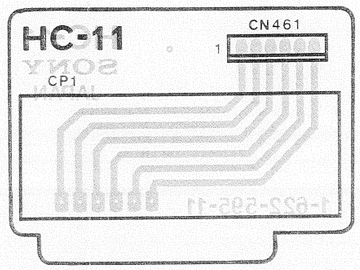


PC-32 — COMPONENT SIDE —
1-622-603-11
BVW-60P BVW-75P
BVW-65P
BVW-70P

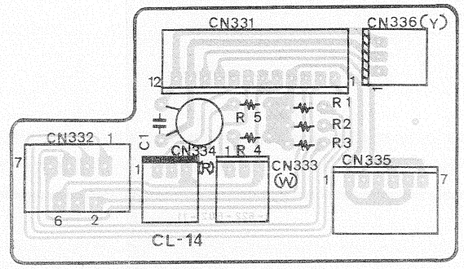
S/N 10171 and higher



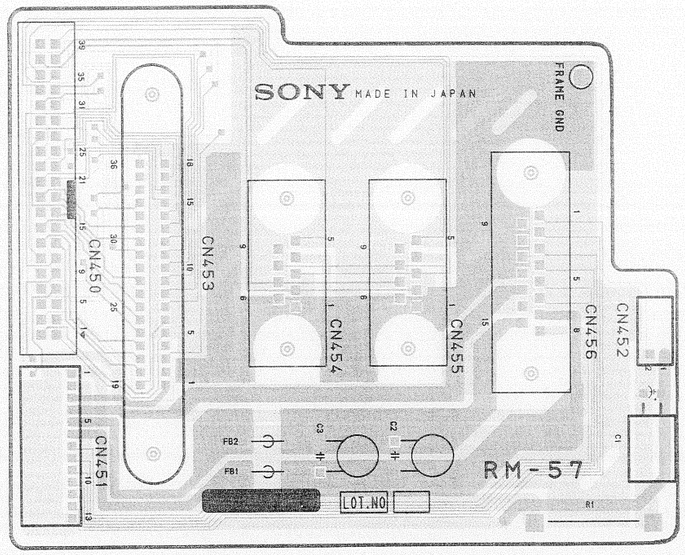
PC-47 — COMPONENT SIDE —
1-628-786-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



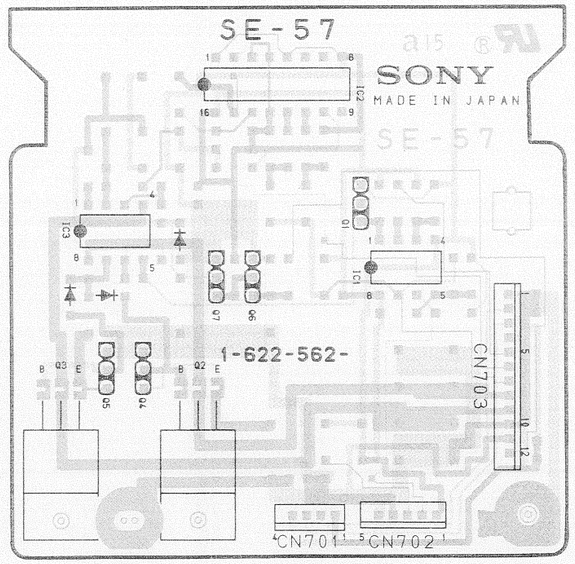
HC-11 — COMPONENT SIDE —
1-622-595-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



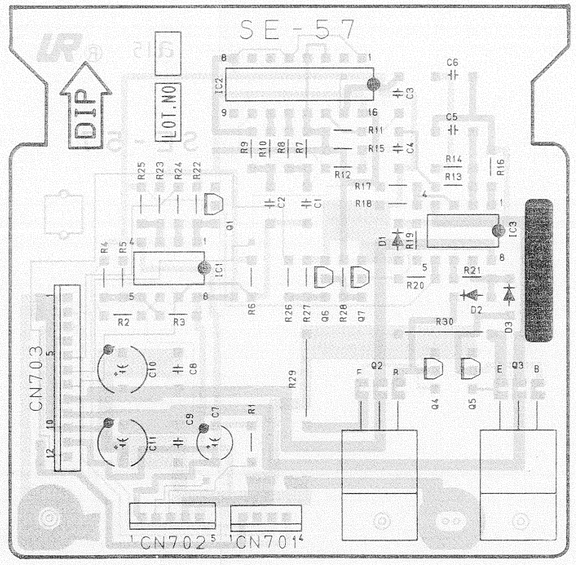
CL-14 — COMPONENT SIDE —
1-622-602-11
BVW-60P BVW-75P
BVW-65P
BVW-70P



RM-57 — COMPONENT SIDE —
1-624-153-11,12,13
BVW-60P BVW-70P
BVW-65P BVW-75P



SE-57 — COMPONENT SIDE —
1-622-562-12
BVW-60P BVW-75P
BVW-65P
BVW-70P

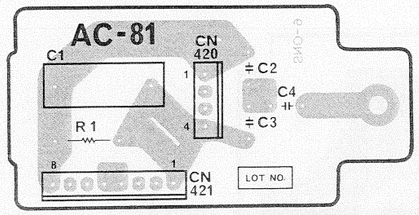


SE-57 — SOLDERING SIDE —
1-622-562-12
BVW-60P BVW-75P
BVW-65P
BVW-70P

AC-81/96, C1, C2, M1, M2

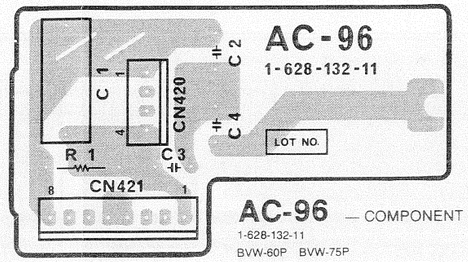
AC-81/96 ; RELAY BOARD OF AC INLET
C1 ; SWITCHING REGULATOR
C2 ; SWITCHING REGULATOR
M1 ; SWITCHING REGULATOR
M2 ; SWITCHING REGULATOR

S/N 10001 through 10170

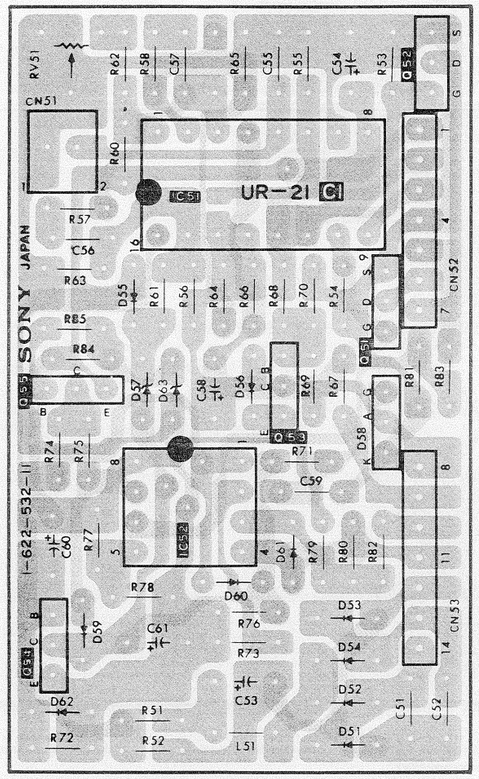


AC-81 — COMPONENT SIDE —
1-622-608-12
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

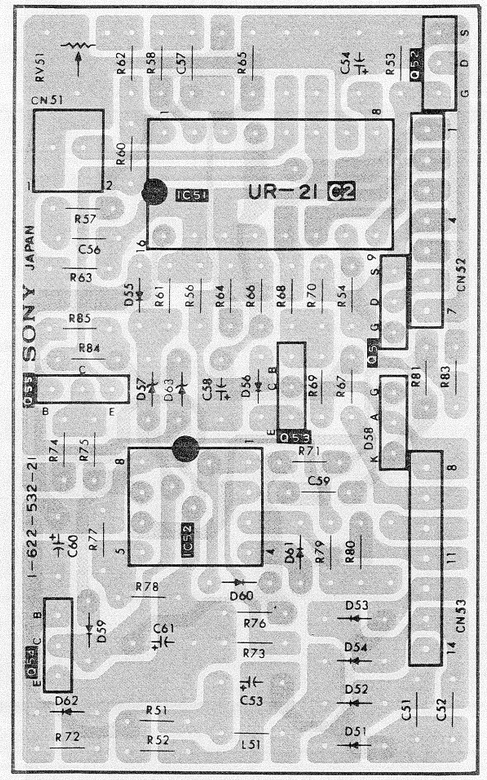
S/N 10171 and higher



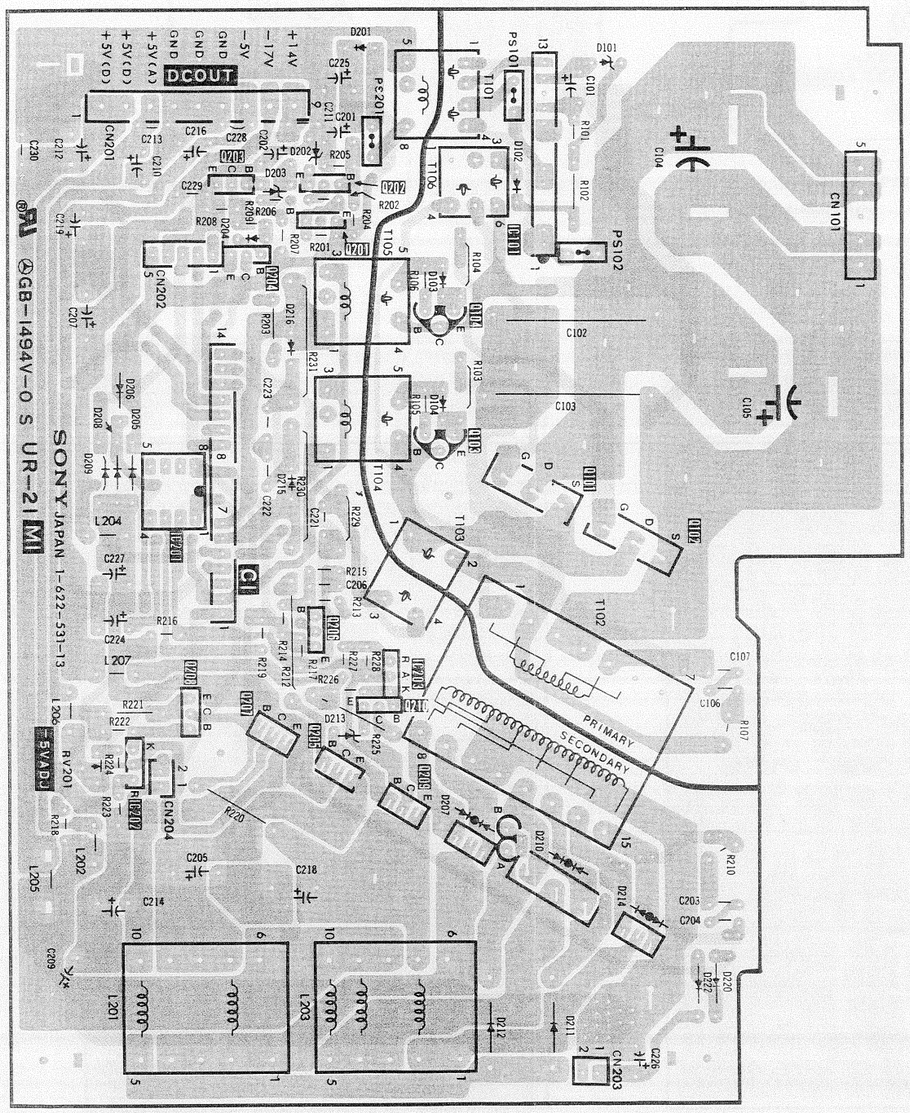
AC-96 — COMPONENT SIDE —
1-628-132-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



UR-21B, C1 — SOLDERING SIDE —
1-622-532-11
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

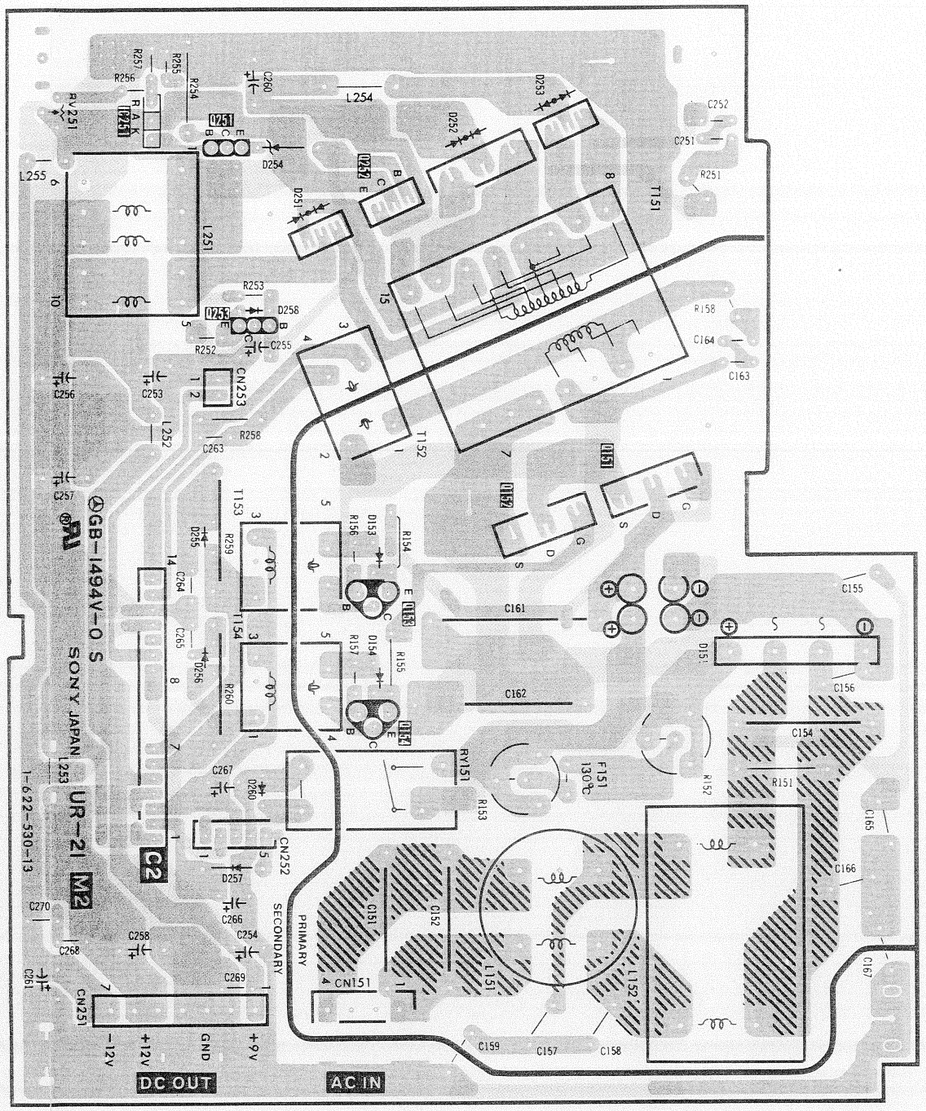


UR-21B, C2 — SOLDERING SIDE —
1-622-532-21
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P



UR-21B, M1 — SOLDERING SIDE —

1-622-531-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

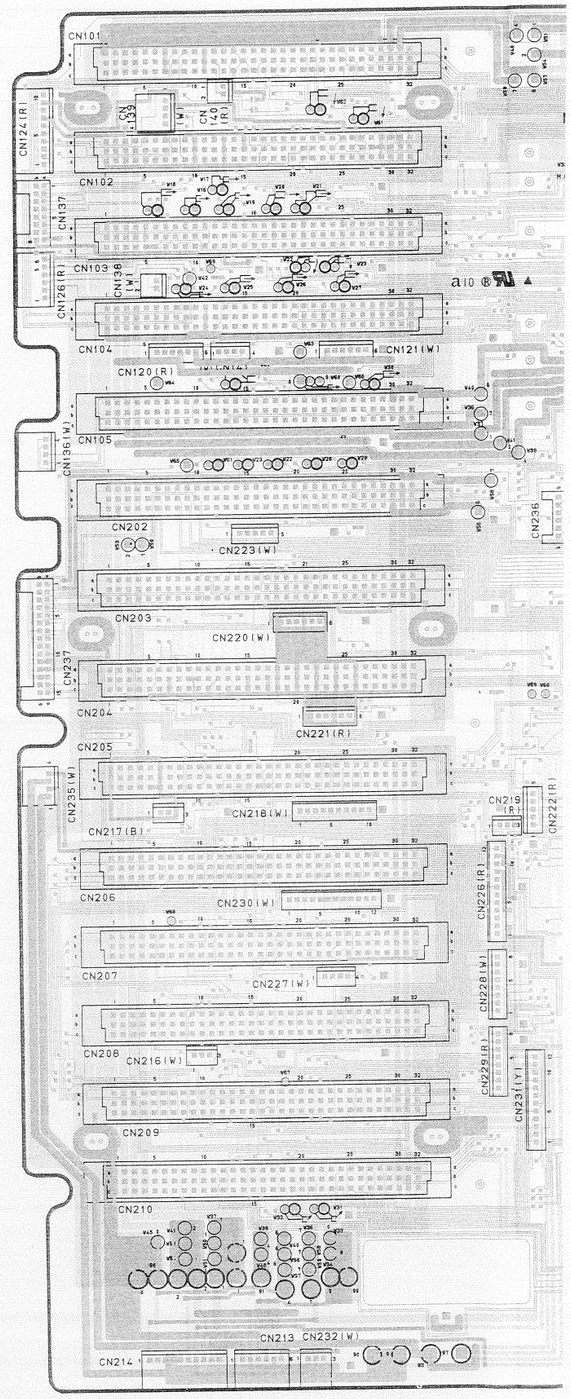


UR-21B, M2 — SOLDERING SIDE —

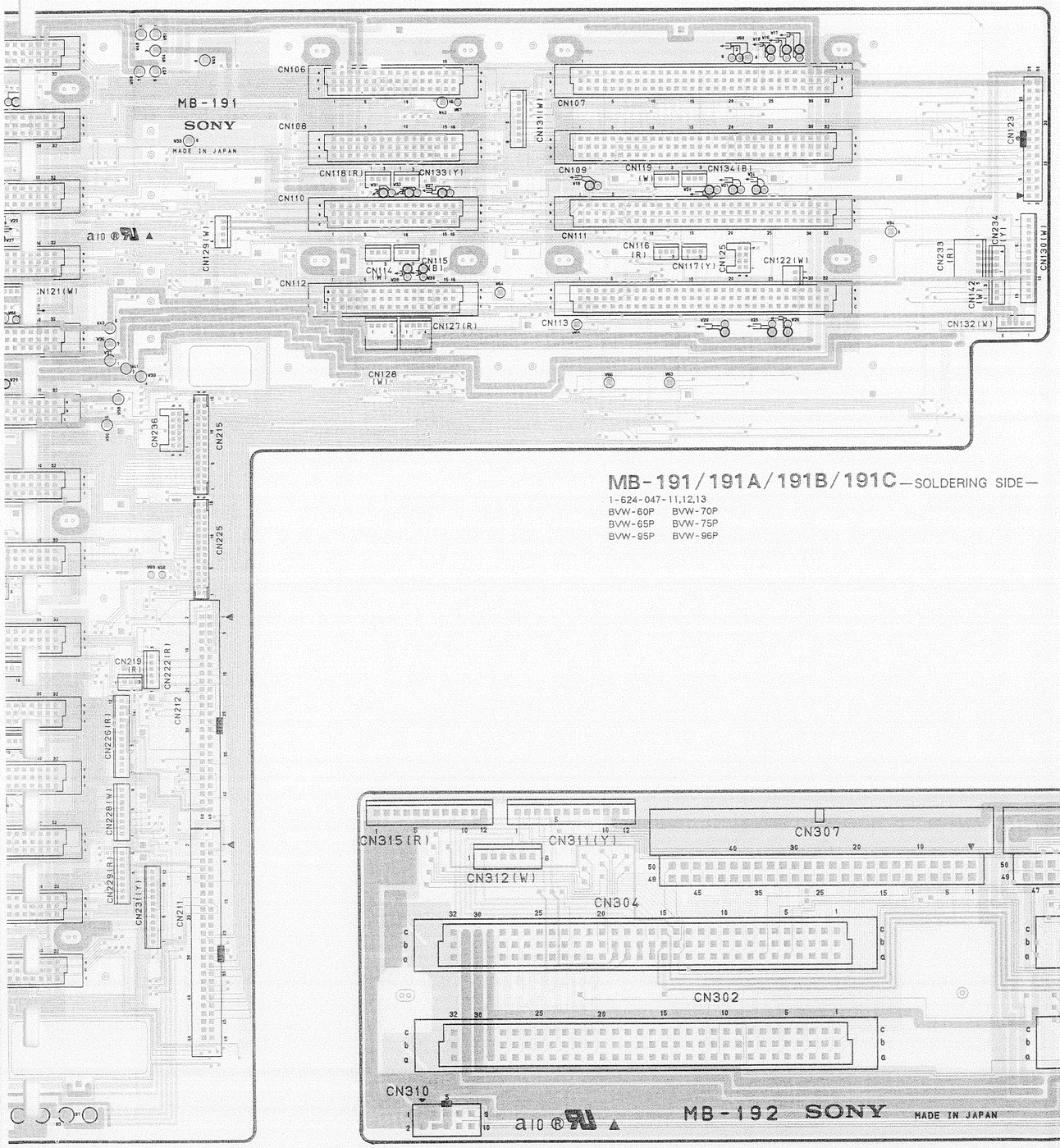
1-622-530-13
BVW-60P BVW-75P
BVW-65P BVW-95P
BVW-70P BVW-96P

MB-191/191A/191B/191C, MB-192

MB-191/191A/191B/191C; MOTHER BOARD
MB-192; MOTHER BOARD



MB-191/191A/191B/191C, MB-192

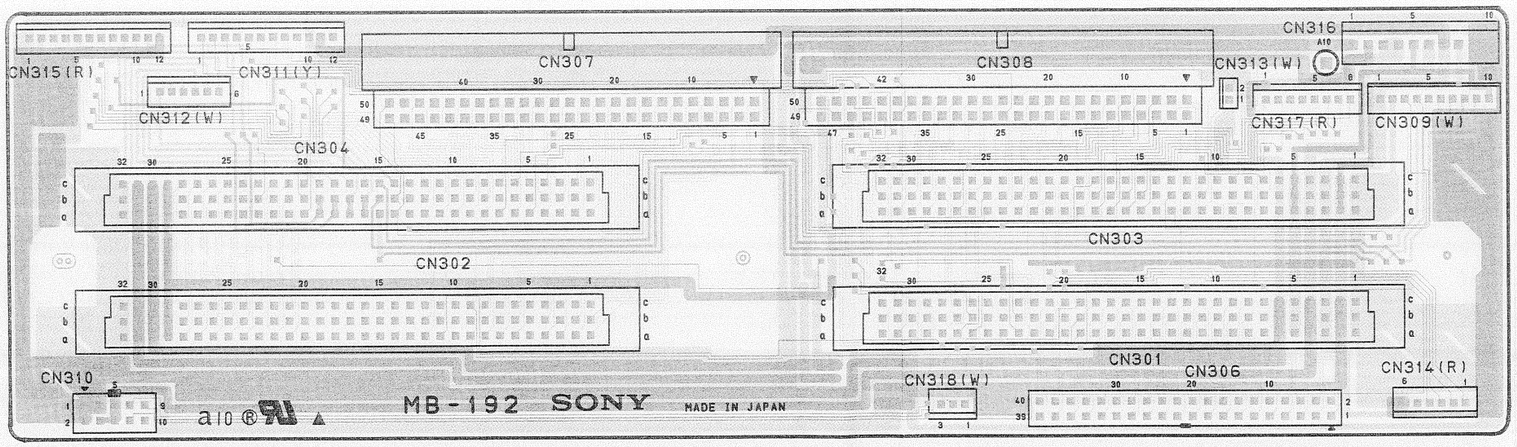


MB-191/191A/191B/191C—SOLDERING SIDE—

1-624-047-11,12,13

BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

	MB-191	MB-191A	MB-191B	MB-191C
BVW-60P				○
BVW-65P			○	
BVW-70P		○		
BVW-75P	○			
BVW-95P			○	
BVW-96P	○			



MB-192—SOLDERING SIDE—

1-624-152-11,12,13

BVW-60P BVW-70P
BVW-65P BVW-75P
BVW-95P BVW-96P

SECTION 18
SEMICONDUCTOR ELECTRODES

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

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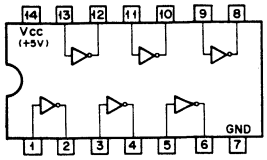
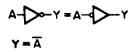
74F04PC (FSC)
SN74LS04NS (TI) FLAT PACKAGE
TTL INVERTER
— TOP VIEW —



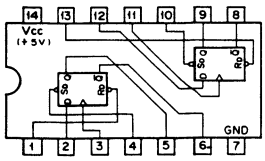


$Y = \overline{A}$

A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL

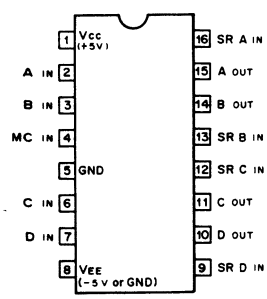
74F74PC (FSC)
SN74LS74ANS (TI) FLAT PACKAGE
TTL D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —

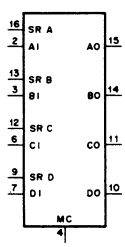


INPUTS				OUTPUTS	
$\overline{Sd}$	$\overline{Rd}$	CK	D	Qn+1	$\overline{Qn+1}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↓	1	1	0
1	1	↓	0	0	1
1	1	0	X	Qn	$\overline{Qn}$

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

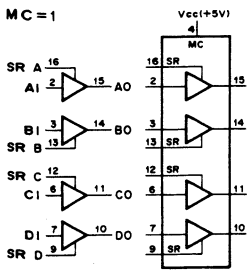
AM26LS30PC (ADVANCED MICRO DEVICES)
LINE DRIVER
— TOP VIEW —



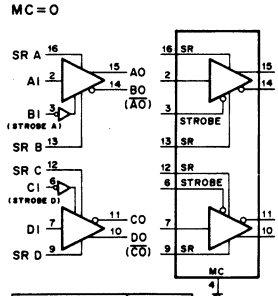


MC ; MODE CONTROL
SR ; SLEW RATE CONTROL

MC=1



MC=0

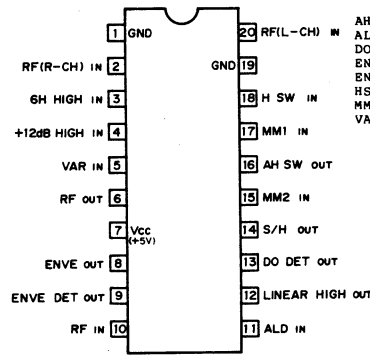


INPUTS		OUTPUTS
MC	A TO D	A TO D
1	0	0
1	1	1

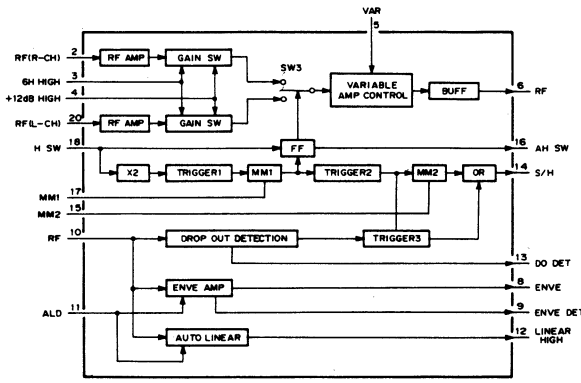
INPUTS			OUTPUTS	
MC	STROBE	A & D	A & D	B & C
0	0	0	0	1
0	0	1	1	0
0	1	X	HI-Z	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

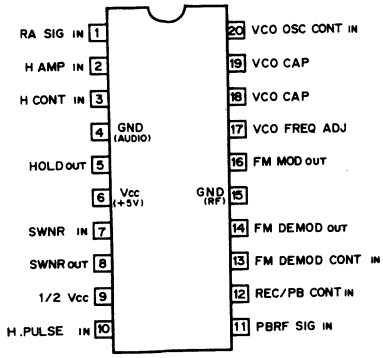
AN3920K (MATSUSHITA)
VTR FM AUDIO RF AMP
— TOP VIEW —



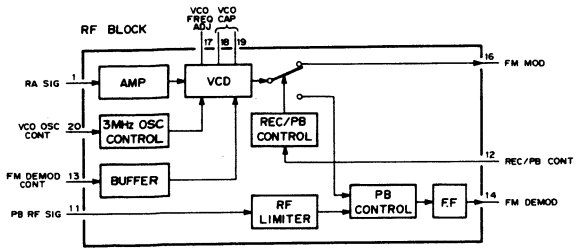
AHSW	;	AUDIO HOLD SWITCH OUTPUT
ALD	;	AUTO LINEAR DETECT INPUT
DO DET	;	DROP OUT DETECT OUTPUT
ENVE	;	ENVELOPE OUTPUT
ENVE DET	;	ENVELOPE DETECTOR OUTPUT
HSW	;	HOLD SWITCH INPUT
MM1,2	;	MONO MULTI
VAR	;	VARIABLE AMP CONTROL INPUT

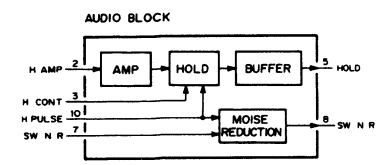


AN3922NK (MATSUSHITA)
VTR, FM AUDIO MODULATOR AND DEMODULATOR
— TOP VIEW —

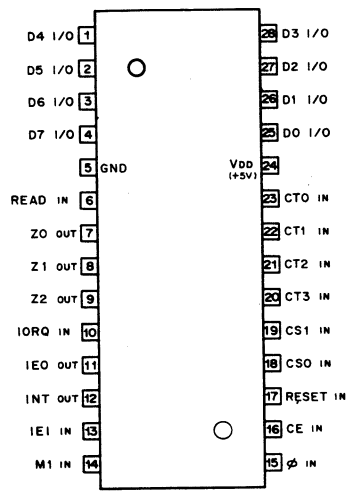


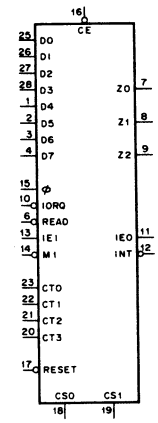

```
FM DEMOD        ; FM DEMODULATION OUTPUT
FM DEMOD CONT   ; FM DEMODULATION CONTROL INPUT
FM MOD          ; FM MODULATION OUTPUT
H AMP           ; HOLD AMP INPUT
H CONT          ; HOLD CONTROL INPUT
H PULSE         ; HOLD PULSE INPUT
PBRF SIG        ; PB RF SIGNAL INPUT
RA SIG          ; REC AUDIO SIGNAL INPUT
REC/PB CONT     ; REC/PB CONTROL INPUT
SWNR            ; SWITCH NOISE REDUCTION INPUT/OUTPUT
VCO CAP         ; VCO CAPACITOR
VCO FREQ ADJ    ; VCO FREQUENCY ADJUSTMENT
VCO OSC CONT    ; VCO OSCILLATION CONTROL INPUT
```





BU18430A (ROHM)
N-MOS COUNTER TIMER CIRCUIT
— TOP VIEW —



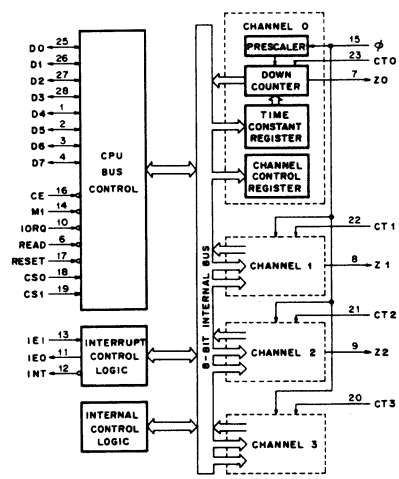



```
φ       ; SYSTEM CLOCK
CE      ; CHIP ENABLE
CSO,CS1 ; CHANNEL SELECT
CTO-CT3 ; EXTERNAL CLOCK/TIMER TRIGGER
D0-D7   ; 3-STATE DATA INPUT/OUTPUT
IEI     ; INTERRUPT ENABLE INPUT
IEO     ; INTERRUPT ENABLE OUTPUT
INT     ; INTERRUPT REQUEST (OPEN DRAIN)
IORQ    ; I/O REQUEST
M1      ; MACHINE CYCLE 1
READ    ; READ CYCLE STATUS
Z0-Z2   ; ZERO COUNT/TIME OUT
```

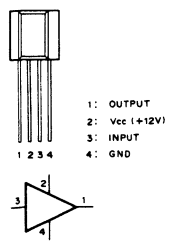
CHANNEL SELECT FUNCTION

CS1	CSO	SELECTED CHANNEL
0	0	0
0	1	1
1	0	2
1	1	3

0;LOW LEVEL
1;HIGH LEVEL

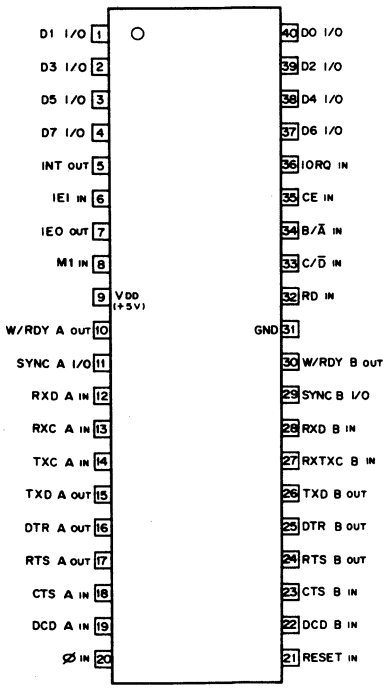


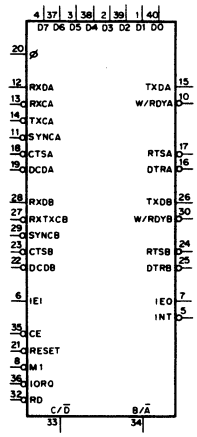
AN607P (MATSUSHITA)
AN608P (MATSUSHITA)
WIDE BAND AMPLIFIER
— PRINTED SIDE VIEW —



C

BU18440A (ROHM)
N-MOS 2-CHANNEL SERIAL INPUT/OUTPUT
FOR MICROCOMPUTER SYSTEM
— TOP VIEW —

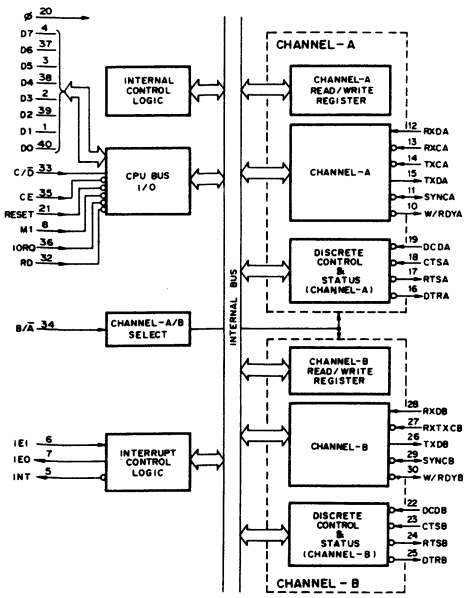




CHANNEL SELECT FUNCTION TABLE

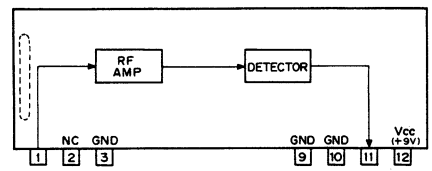
C/D̄	B/Ā	FUNCTION
0	0	CH-A DATA
0	1	CH-B DATA
1	0	CH-A CONT. WORD
1	1	CH-B CONT. WORD

0; LOW LEVEL
1; HIGH LEVEL

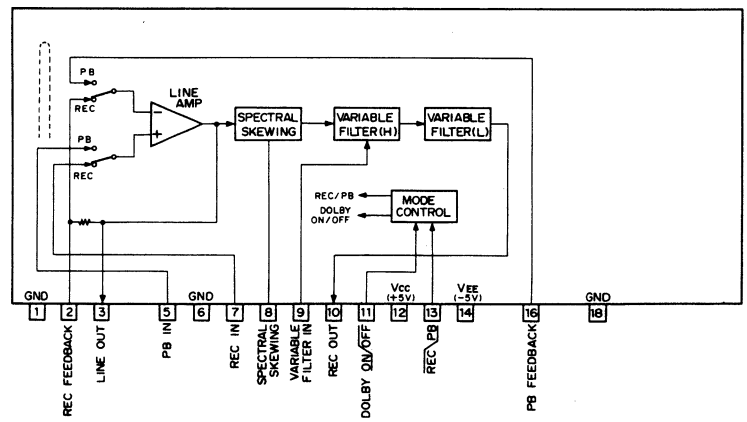


Ø	; SYSTEM CLOCK IN	RXD	; RECEIVE DATA IN
D7-D0	; DATA BUS(3 STATE) I/O	RXC	; RECEIVE CLOCK IN
C/D̄	; CONTROL/DATA SELECT IN	TXC	; TRANSMIT CLOCK IN
CE	; CHIP ENABLE IN	TXD	; TRANSMIT DATA OUT
M1	; MACHINE CYCLE 1 IN	SYNC	; EXTERNAL CHARACTER SYNCHRONIZATION I/O
IORQ	; I/O REQUEST IN	W/RDY	; WAIT/READY OUT
RD	; READ IN	DCD	; DATA CARRIER DETECT IN
B/Ā	; CHANNEL B/A SELECT IN	CTS	; CLEAR TO SEND IN
IEI	; INTERRUPT ENABLE IN	RTS	; REQUEST TO SEND OUT
IEO	; INTERRUPT ENABLE OUT	DTR	; DATA TERMINAL READY OUT
INT	; INTERRUPT OUT		

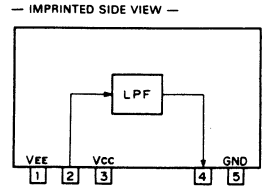
BX1098 (SONY)
RF METER DRIVER
— REAR VIEW —



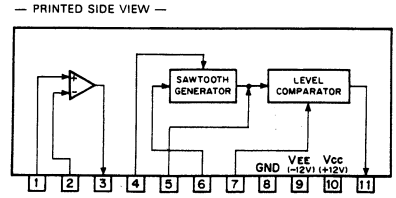
BX1152 (SONY)
DOLBY (C TYPE) NOISE REDUCTION SYSTEM
— REAR VIEW —



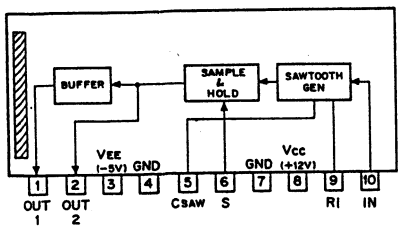
BX-1343A (SONY)
ACTIVE LOW-PASS FILTER
— IMPRINTED SIDE VIEW —



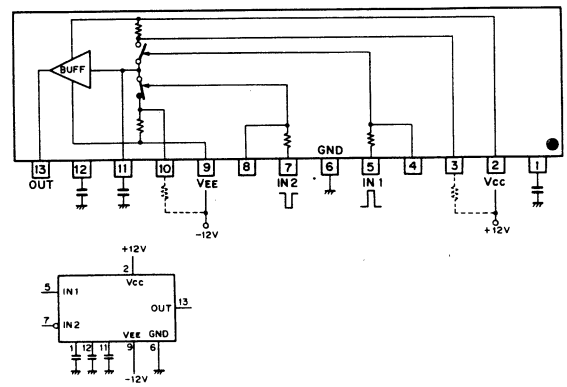
BX1460 (SONY)
PHASE SHIFTER
— PRINTED SIDE VIEW —



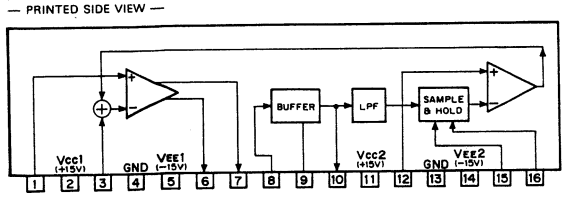
BX1461 (SONY)
PHASE DETECTOR
— PRINTED SIDE —

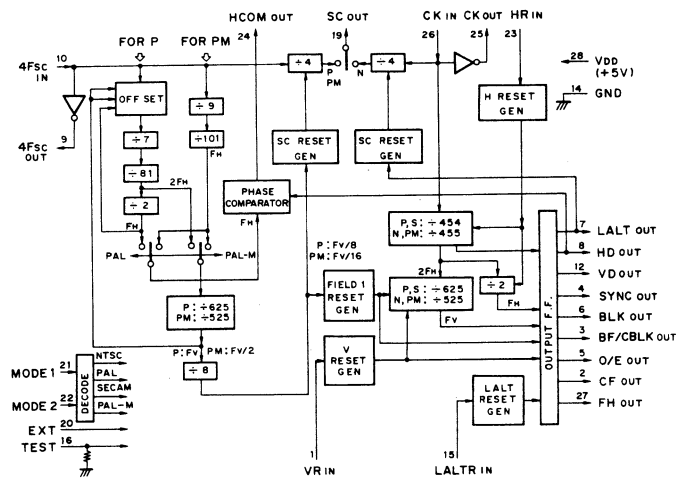


BX381 (SONY)
PHASE COMPARATOR
— SIDE VIEW —

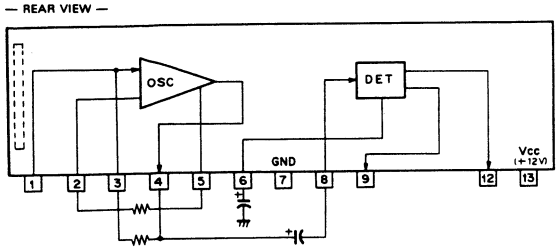


BX1464 (SONY)
SBX4002-01 (NEC)
CLAMP AND BUFFER
— PRINTED SIDE VIEW —

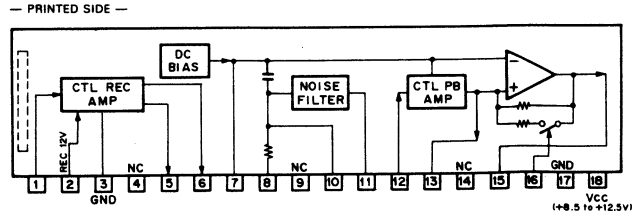




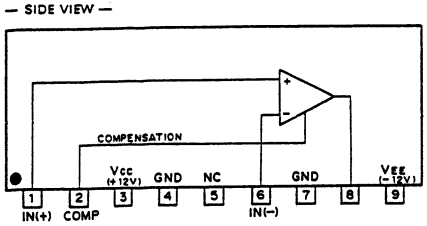
BX343 (SONY)
OSCILLATOR/DETECTOR
— REAR VIEW —



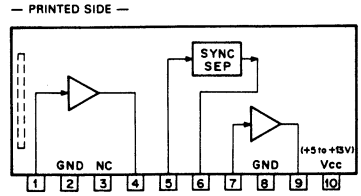
BX3914 (SONY)
CTL REC/PB AMPLIFIER
— PRINTED SIDE —



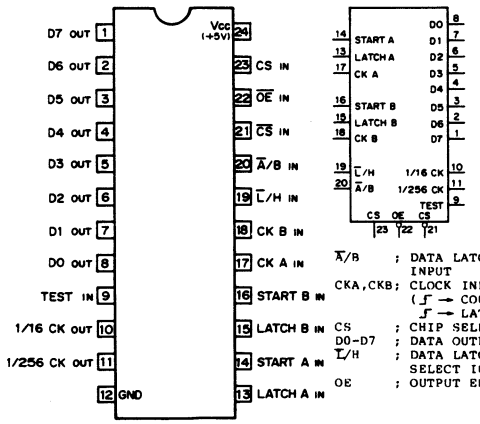
BX365A (SONY)
VIDEO AMPLIFIER
— SIDE VIEW —



BX3915A (SONY)
SYNC SEPARATOR
— PRINTED SIDE —



CF77074NT (TI)
CLOCK COUNTER
— TOP VIEW —

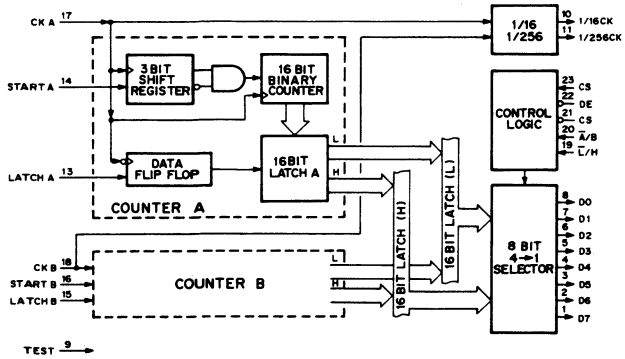


A/B ; DATA LATCH A/B SELECT INPUT
CKA,CKB; CLOCK INPUT
(∫ → COUNT UP
∫ → LATCH)
CS ; CHIP SELECT INPUT
D0-D7 ; DATA OUTPUT
L/H ; DATA LATCH LOW/HIGH SELECT INPUT
OE ; OUTPUT ENABLE INPUT

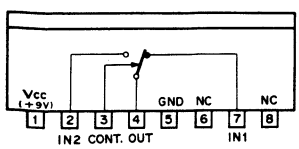
MODE SELECT

INPUT					OUTPUT
CS	$\overline{CS}$	$\overline{OE}$	A/B	L/H	D0-D7
0	X	X	X	X	HI-Z
1	0	0	0	0	LATCH A LOW BYTE
1	0	0	0	1	LATCH A HIGH BYTE
1	0	0	1	0	LATCH B LOW BYTE
1	0	0	1	1	LATCH B HIGH BYTE
X	1	X	X	X	HI-Z
X	X	1	X	X	

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE



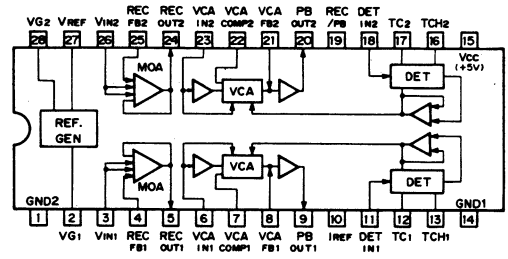
CX20061 (SONY)
ANALOG SWITCH
— SIDE VIEW —



CONT.	SW
0	
1	

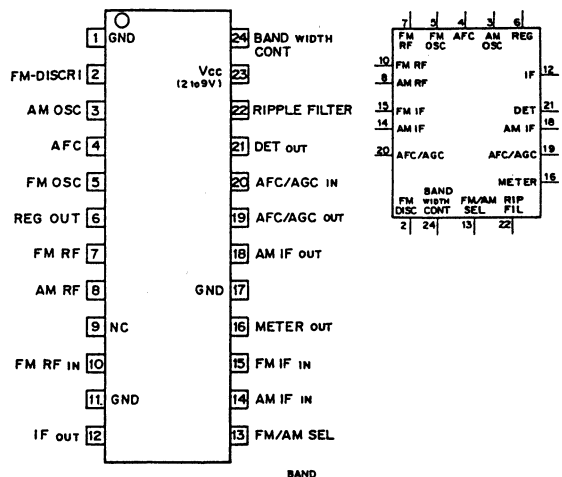
0; LOW LEVEL
1; HIGH LEVEL

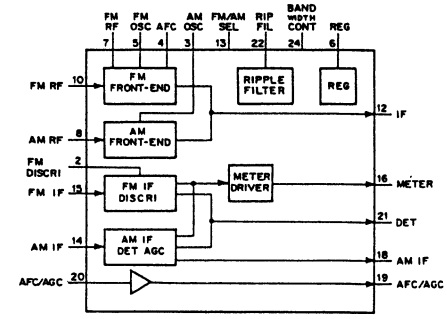
CX20099 (SONY)
VOLTAGE CONTROLLED AMP/DETECTOR/MAIN OPERATIONAL AMP
— TOP VIEW —



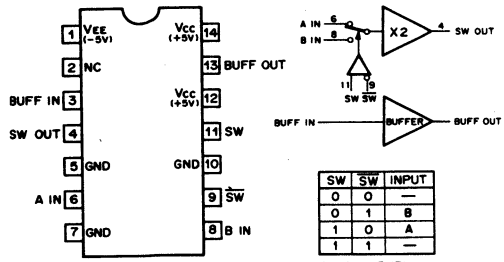
DET ; DETECTOR
TC ; TIME CONSTANT
TCH; TIME CONSTANT HOLD
VCA ; VOLTAGE CONTROLLED AMP

CX20111 (SONY) FLAT PACKAGE
FM/AM FRONT-END/IF/DET PROCESSOR
— TOP VIEW —





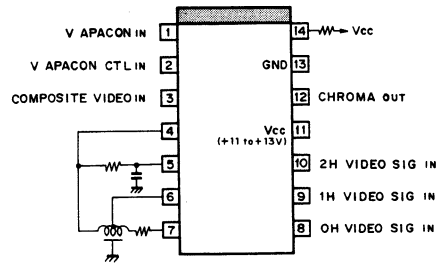
CX20158 (SONY)
VIDEO SWITCHER AND BUFFER
— TOP VIEW —

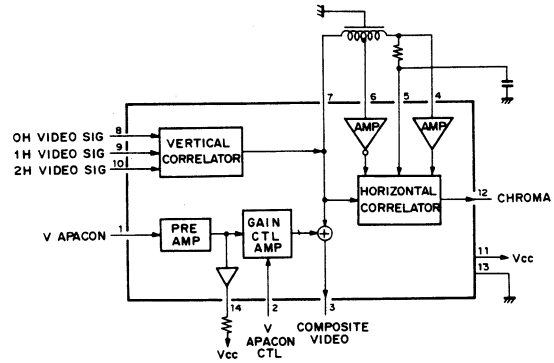


SW	SW	INPUT
0	0	—
0	1	B
1	0	A
1	1	—

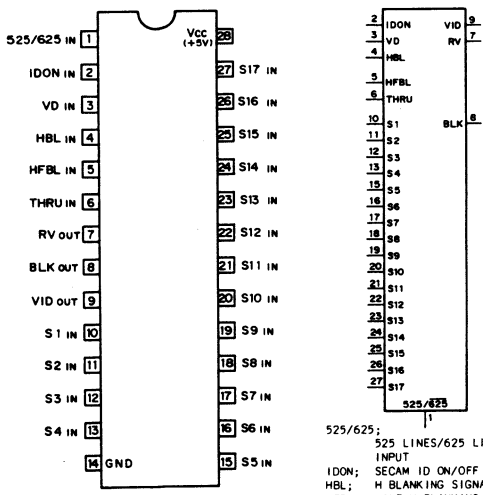
0;LOW LEVEL
1;HIGH LEVEL
–;INDEFINITE

CX22013 (SONY)
DYNAMIC COMB FILTER
— TOP VIEW —

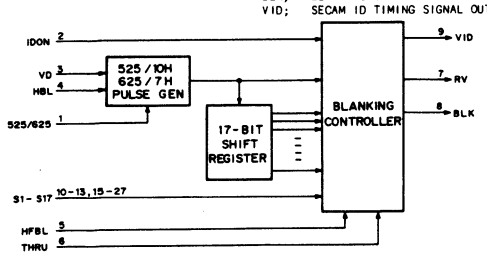




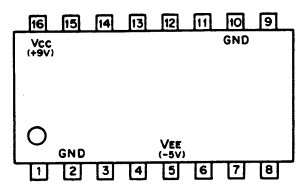
CX20162 (SONY)
BIPOLAR/TTL VERTICAL BLANKING WIDTH CONTROLLER
— TOP VIEW —

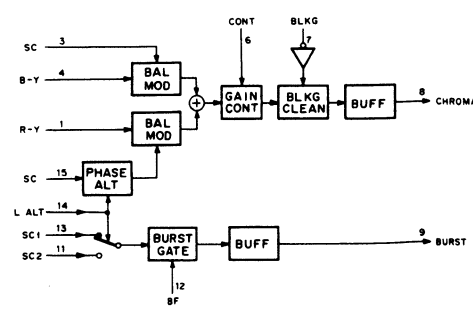


525/625; 525 LINES/625 LINES SETTING INPUT
IDON; SECAM ID ON/OFF SIGNAL INPUT
HBL; H BLANKING SIGNAL INPUT
HFBL; HALF H BLANKING SIGNAL INPUT
THRU; FORCIBLE BLANKING SIGNAL INPUT
S1-S17; BLANKING LINE SELECTION SWITCH INPUTS
RV; 14TH LINE TIMING SIGNAL OUTPUT
BLK; BLANKING SIGNAL OUTPUT
VID; SECAM ID TIMING SIGNAL OUTPUT

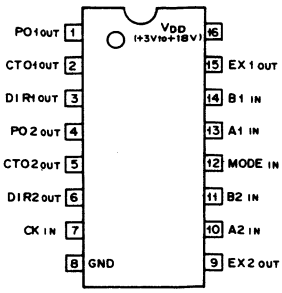


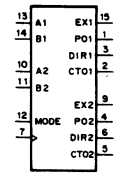
CX22017 (SONY)
VIDEO SIGNAL PROCESSOR
— TOP VIEW —





CX23028 (SONY)
C-MOS SYNCHRONOUS ROTATIONAL DIRECTION DETECTOR
— TOP VIEW —





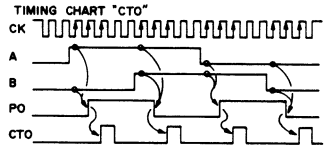
A,B ; SIGNAL INPUTS
EX ; A⊕B
PO ; A⊕B(SYNCHRONOUS)
DIR ; DIRECTION OUTPUT
CTO ; COUNT PULSE OUTPUT
MODE ; DIR1 & CTO1 MODE SELECT
⊕ ; EXCLUSIVE-OR

MODE="1"

DIRECTION OUTPUT "DIR"

INPUTS	DIR
A∠B	1
B∠A	0

TIMING CHART "CTO"



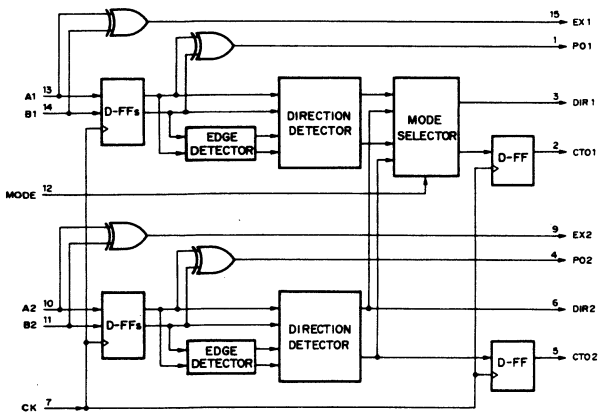
MODE="0"

DIRECTION OUTPUT "DIR"

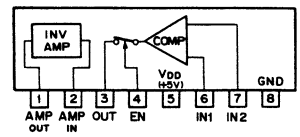
INPUTS		DIR 1	DIR 2
CH1	CH2		
A1∠B1	A2∠B2	1	THE SAME FUNCTION OF MODE "1"
B1∠A1	A2∠B2	OUTPUT "1" AND "0" ALTERNATELY	
A1∠B1	B2∠A2		
B1∠A1	B2∠A2	0	

CTO 1 ; CTO 1 with MODE "0" = CTO 1 with MODE "1" + CTO 2
CTO 2 ; THE SAME FUNCTION OF MODE "1"

1 ; HIGH LEVEL
0 ; LOW LEVEL
A∠B ; THE PHASE OF SIGNAL A IS IN ADVANCE FOR THE PHASE OF B.



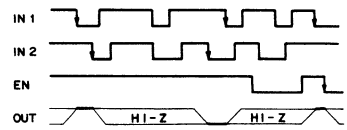
CX23065 (SONY)
N-MOS PHASE COMPARATOR WITH INVERSION AMPLIFIER
— PRINTED SIDE VIEW —



EN	OUT
1	ACTIVE
0	HIGH IMPEDANCE

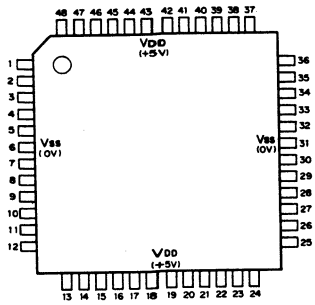
1; HIGH LEVEL
0; LOW LEVEL

TIMMING CHART



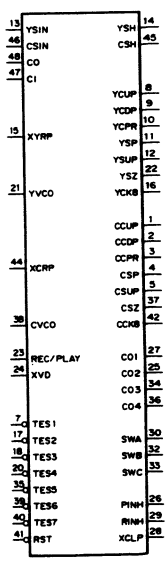
HI-Z ; HI-IMPEDANCE

CX23084 (SONY) FLAT PACKAGE
C-MOS TIMING GENERATOR/CCD CLOCK GENERATOR
— TOP VIEW —

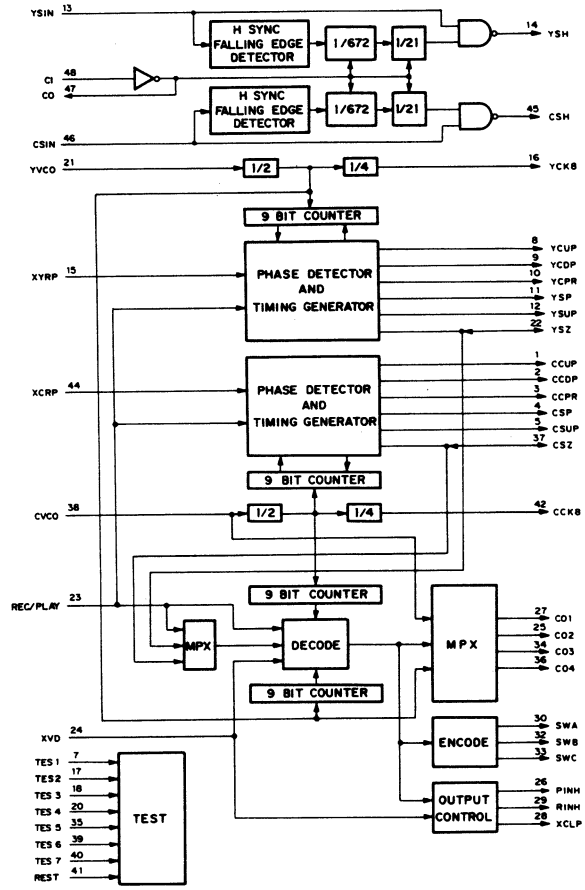


PIN ASSIGNMENT

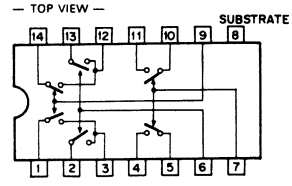
PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		○	CCUP	13	○		YSIN	25		○	C02	37	○	○	CSZ
2		○	CCDP	14		○	YSH	26		○	PINH	38	○		CVCO
3		○	CCPR	15	○		XYRP	27		○	C01K	39	○		$\overline{TES6}$
4		○	CSP	16		○	YCK8	28		○	XCLP	40	○		$\overline{TES7}$
5		○	CSUP	17	○		$\overline{TES2}$	29		○	RINH	41	○		$\overline{RST}$
6			Vss	18	○		$\overline{TES3}$	30		○	SWA	42		○	CCK8
7	○		$\overline{TES1}$	19			VDD	31			Vss	43			VDD
8		○	YCUP	20	○		$\overline{TES4}$	32		○	SWB	44	○		XCRP
9		○	YCDP	21	○		YVCO	33		○	SWC	45		○	CSH
10		○	YCPR	22	○	○	YSZ	34		○	C03	46	○		CSIN
11		○	YSP	23	○		REC/PLAY	35	○		$\overline{TES5}$	47		○	CO
12		○	YSUP	24	○		XVD	36		○	C04	48	○		CI



CCDP ; CHROMA CHARGE DOWN PULSE OUT
CCK8 ; CHROMA VCO 1/8 COUNT DOWN OUT
CCPR ; CHROMA CHARGE PUMP RESET PULSE OUT
CCUP ; CHROMA CHARGE UP PULSE OUT
CI ; CLOCK IN(SELECTED H)
CO ; CLOCK OUT(SELECTED H)
CO1-4 ; CLOCK OUT(CCD DRIVE)
CSH ; CHROMA SELECTED H OUT
CSIN ; CHROMA HORIZONTAL SYNC IN
CSP ; CHROMA SAMPLING PULSE OUT
CSUP ; CHROMA SPEED UP PULSE OUT
CSZ ; CHROMA SYNC ZERO OUT(PLAYBACK)
CVCO ; CHROMA VCO CLOCK IN
PINH ; PLAY INHIBIT OUT
REC/PLAY ; REC/PLAY SELECT IN
RST ; RESET IN
RINH ; REC INHIBIT OUT
SWA,SWB,SWC ; CCD READ DATA SELECT A,B,C OUT
TES1-7 ; TEST1-7 IN
XCLP ; CHROMA CLAMP OUT
XCRP ; CHROMA VCO RESET PULSE IN
XYRP ; Y VCO RESET PULSE
XVD ; VD IN
YCDP ; Y CHARGE DOWN PULSE OUT
YCK8 ; Y VCO 1/8 COUNT DOWN OUT
YCPR ; Y CHARGE PUMP RESET PULSE OUT
YCUP ; Y CHARGE UP PULSE OUT
YSH ; Y SELECTED H OUT
YSIN ; Y HORZONTAL SYNC IN
YSP ; Y SAMPLING PULSE OUT
YSUP ; Y SPEED UP PULSE OUT
YSZ ; Y SYNC ZERO(RECORD)
YVCO ; Y VCO CLOCK IN

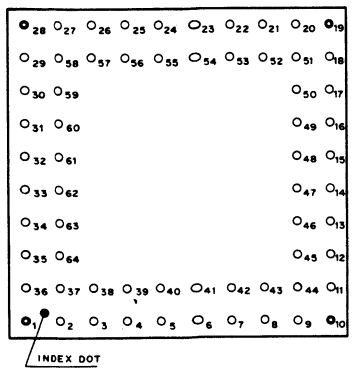


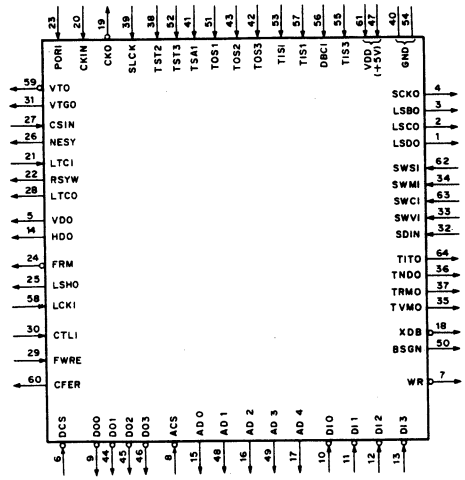
CX770 (SONY)
— TOP VIEW —



C

CX7907A (SONY)
C-MOS TIME CODE GENERATOR
— TOP VIEW —





PIN ASSIGNMENT

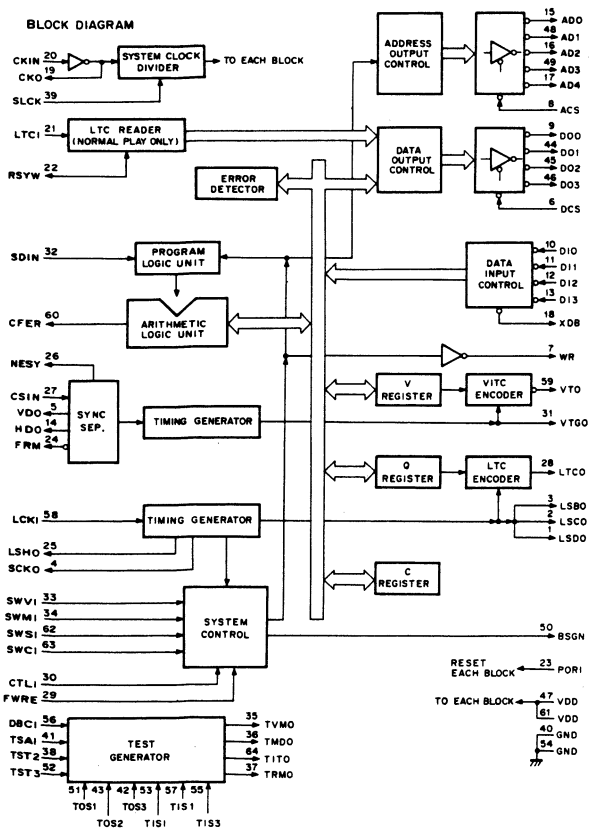
Pin No.	IN	OUT	SYMBOL
1		o	LSDO
2		o	LSCO
3		o	LSBO
4		o	SCKO
5		o	VDO
6	o		DCS
7		o	WR
8	o		ACS
9		o	DO0
10	o		DI0
11	o		DI1
12	o		DI2
13	o		DI3
14		o	HDO
15		o	AD0
16		o	AD2

Pin No.	IN	OUT	SYMBOL
17		o	AD4
18		o	XDB
19		o	CKO
20	o		CKIN
21	o		LTCI
22		o	RSYW
23	o		PORI
24		o	FRM
25		o	LSHO
26		o	NESY
27	o		CSIN
28		o	LTCO
29	o		FWRE
30	o		CTLI
31		o	VTGO
32	o		SDIN

Pin No.	IN	OUT	SYMBOL
33	o		SWVI
34	o		SWMI
35		o	TVMO
36		o	TNDO
37		o	TRMO
38	o		TST2
39	o		SLCK
40		o	GND
41	o		TSAI
42	o		TOS3
43	o		TOS2
44		o	DO1
45		o	DO2
46		o	DO3
47	o		VDD(+5V)
48		o	AD1

Pin No.	IN	OUT	SYMBOL
49		o	AD3
50		o	BSGN
51	o		TOS1
52	o		TST3
53	o		TISI
54		o	GND
55	o		TIS3
56	o		DBCI
57	o		TIS1
58	o		LCKI
59		o	VTO
60		o	CFER
61	o		VDD(+5V)
62	o		SWSI
63	o		SWCI
64		o	TITO

BLOCK DIAGRAM



FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE CHIP SELECT INPUT
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
17	AD4	
50	BSGN	BUSY GENERATOR OUTPUT
60	CFER	COLOR FRAME ERROR FLAG OUTPUT
20	CKIN	SYSTEM CLOCK INPUT
19	CKO	CLOCK OUTPUT
27	CSIN	COMPOSITE SYNC INPUT
30	CTLI	CTL(TIMER) SIGNAL INPUT ( )
6	DCS	DATA LINE CHIP SELECT INPUT (NEGATIVE-LOGIC)
10	DI0	DATA BUS INPUT (NEGATIVE-LOGIC)
11	DI1	
12	DI2	
13	DI3	
9	DO0	DATA BUS OUTPUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
24	FRM	FRAME SIGNAL OUTPUT (NEGATIVE-LOGIC)
29	FWRE	CTL DIRECTION INPUT
14	HDO	HORIZONTAL SYNC DRIVE OUTPUT
58	LCKI	LTC CLOCK INPUT (SMPTE 9.6kHz/EBU 8kHz)
3	LSBO	LTC SYNCHRONOUS SIGNAL B OUTPUT
2	LSCO	LTC SYNCHRONOUS SIGNAL C OUTPUT
1	LSDO	LTC SYNCHRONOUS SIGNAL D OUTPUT
25	LSHO	LTC SYNCHRONOUS SIGNAL H OUTPUT
21	LTCI	LTC INPUT
28	LTCO	LTC SIGNAL OUTPUT
26	NESY	LOST-SYNC FLAG OUTPUT
23	PORI	POWER ON RESET INPUT
22	RSYW	READ SYNC WORD OUTPUT
4	SCKO	SWITCHES SIGNAL IN CLOCK OUTPUT
32	SDIN	SERIAL DATA INPUT
39	SLCK	SELECT CLOCK INPUT
63	SWCI	SWITCHES SIGNAL C INPUT
34	SWMI	SWITCHES SIGNAL M INPUT
62	SWSI	SWITCHES SIGNAL S INPUT
33	SWVI	SWITCHES SIGNAL V INPUT
5	VDO	VERTICAL SYNC DRIVE OUTPUT
31	VTGO	VITC GATE SIGNAL OUTPUT
59	VTO	VITC SIGNAL OUTPUT (NEGATIVE-LOGIC)
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
18	XDB	EXTERNAL DATA BUS IN FLAG OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
56	DBCI	TEST INPUT (TO BE CONNECTED WITH GND)
57	TIS1	
55	TIS3	
53	TISI	
51	TOS1	
43	TOS2	
42	TOS3	
41	TSAI	
38	TST2	
52	TST3	
64	TITO	TEST OUTPUT (TO BE LEFT OPEN)
36	TNDO	
37	TRMO	
35	TVMO	

#32 SDIN

LSDO	LSCO	LSBO	SDIN	FUNCTION
0	0	0	┐	INCREASE IN BIT 'FR or U1'
0	0	1		INCREASE IN BIT 'FT or U2'
0	1	0		INCREASE IN BIT 'SE or U3'
0	1	1		INCREASE IN BIT 'ST or U4'
1	0	0		INCREASE IN BIT 'MN or U5'
1	0	1		INCREASE IN BIT 'MT or U6'
1	1	0		INCREASE IN BIT 'HR or U7'
1	1	1	┘	INCREASE IN BIT 'HT or U8'

NOTE;INFLUENCED BIT IS DECIDED BY FIRST 2 BITS OF SWCI.

#33 SWVI

LSDO	LSCO	LSBO	SWVI	FUNCTION
0	0	0	SW1A†	VITC POSITION SELECT A
0	0	1	SW1B†	
0	1	0	SW1C†	
0	1	1	SW1D†	
1	0	0	SW2A†	VITC POSITION SELECT B
1	0	1	SW2B†	
1	1	0	SW2C†	
1	1	1	SW2D†	

†;VITC POSITION SELECT

SW1D SW2D	SW1C SW2C	SW1B SW2B	SW1A SW2A	INSERTION LINE NTSC	INSERTION LINE PAL,SECAM
0	0	0	0	LINE 25	LINE 22,335
0	0	0	1	24	21,334
0	0	1	0	23	20,333
0	0	1	1	22	19,332
0	1	0	0	21	18,331
0	1	0	1	20	17,330
0	1	1	0	19	16,329
0	1	1	1	18	15,328
1	0	0	0	17	14,327
1	0	0	1	16	13,326
1	0	1	0	15	12,325
1	0	1	1	14	11,324
1	1	0	0	13	10,323
1	1	0	1	12	9,322
1	1	1	0	11	8,321
1	1	1	1	10	7,320

#34 SWMI

LSDO	LSCO	LSBO	SWMI	FUNCTION
0	0	0	x	INSERT SWMI DATA INTO BIT 'AS1'(NEGATIVE-LOGIC)
0	0	1	x	INSERT SWMI DATA INTO BIT 'AS2'(NEGATIVE-LOGIC)
0	1	0	x	INSERT SWMI DATA INTO BIT 'AS3'(NEGATIVE-LOGIC)
0	1	1	x	INSERT SWMI DATA INTO BIT 'AS4'(NEGATIVE-LOGIC)
1	0	0	x	INSERT SWMI DATA INTO BIT 'AS5'(NEGATIVE-LOGIC)
1	0	1	x	INSERT SWMI DATA INTO BIT 'AS6'(NEGATIVE-LOGIC)
1	1	0	ƒ	COLOR FRAME LOCK IN FIELD 1
1	1	1	0	COLOR FRAME OFF
1	1	1	1	COLOR FRAME ON

X;DON'T CARE.

#62 SWSI

LSDO	LSCO	LSBO	SWSI	FUNCTION
0	0	0	FBS1*	VITC FIELD MARK/ LTC PHASE CORRECTION
0	0	1	FBS2*	
0	1	0	FBS3*	POSITION SELECT
0	1	1	0	PHASE CORRECTION ON
0	1	1	1	PHASE CORRECTION OFF
1	0	0	S1**	SIGNAL FORMAT SELECT
1	0	1	S2**	
1	1	0	S4**	
1	1	1	x	-

x;DON'T CARE.

*;VITC FIELD MARK/LTC PHASE CORRECTION POSITION SELECT

FBS3	FBS2	FBS1	FIELD MARK POSITION	LTC BIT No.
0	0	0	AS1	10
0	0	1	AS2	11
0	1	0	AS3	27
0	1	1	AS4	43
1	0	0	AS5	58
1	0	1	AS6	59
1	1	0	-	-
1	1	1	-	-

NOTE;LTC PHASE CORRECTION BIT OF CX7907 IS FIXED ON BIT-63.

**;SIGNAL FORMAT SELECT

S4	S2	S1	FORMAT	FRAME
0	0	0	FILM	24
0	0	1	NOT ALLOWED	-
0	1	x		
1	0	0	PAL,SECAM	25
1	0	1	NOT ALLOWED	-
1	1	0	NTSC NDF	30
1	1	1	NTSC DF	30

DF;DROP FRAME
NDF;NON DROP FRAME
x;DON'T CARE.

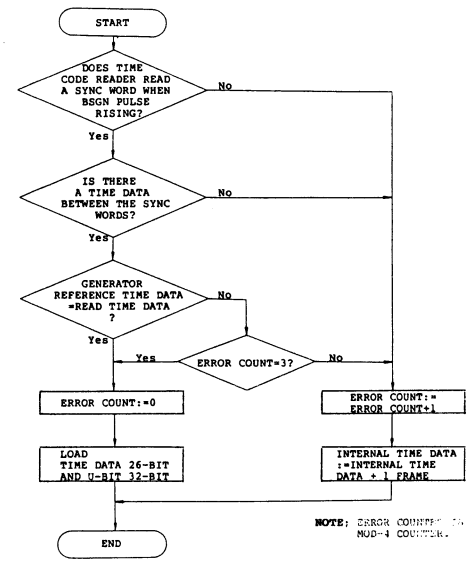
0;LOW LEVEL
1;HIGH LEVEL

#63 SWCI

LSDO	LSCO	LSBO	SWCI	FUNCTION	
0	0	0	0	U-BIT	IN/OUT DATA SELECT*1
0	0	0	1	TIME	
0	0	1	0	CTL	
0	0	1	1	TIME/U-BIT	
0	1	0	x	-	
0	1	1	0	DATA RESET ON*2	
0	1	1	1	DATA RESET OFF	
1	0	0	0	TIME DATA HOLD	
1	0	0	1	TIME DATA RUN	
1	0	1	1	EXTERNAL DATA LOAD*2	
1	1	0	0	EXTRAPOLATION ON	
1	1	0	1	EXTRAPOLATION OFF	
1	1	1	x	-	

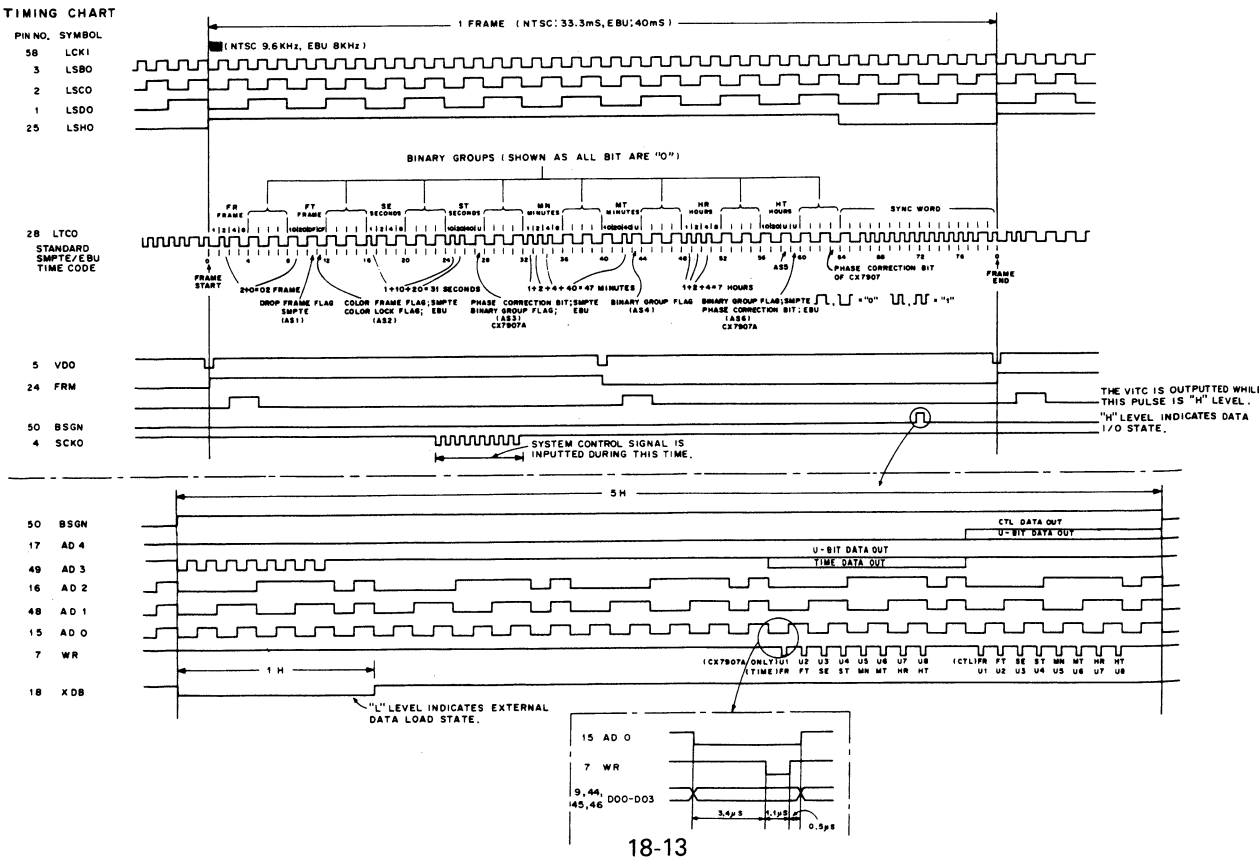
x; DON'T CARE.
*1;REFER TO TIMING CHART(DATA OUT).
*2;INFLUENCED DATA IS DECIDED BY FIRST 2 BITS OF SWCI.

ERROR BYPASS ALGORITHM



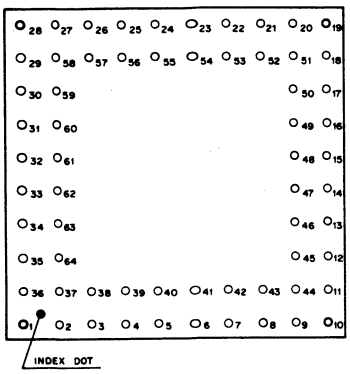
NOTE; ERROR COUNTER IS MOD-4 COUNTER.

TIMING CHART



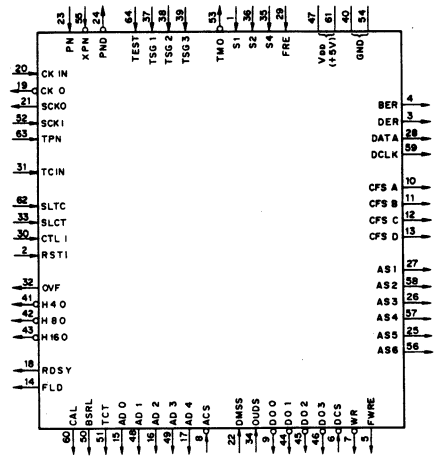
C

CX7912A (SONY)
C-MOS TIME CODE READER
— TOP VIEW —



PIN ASSIGNMENT

PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	O		S1	17		O	AD 4	33	O		SLCT	49		O	AD 3
2	O		RSTI	18		O	RDSY	34	O		OUDS	50		O	BSRL
3		O	DER	19		O	CK O	35	O		S4	51		O	TCT
4		O	BER	20	O		CK IN	36	O		S2	52	O		SCKI
5		O	FWRE	21		O	SCKO	37	O		TSG 1	53		O	TMO
6	O		DCS	22	O		DMSS	38	O		TSG 2	54		O	GND
7		O	WR	23	O		PN	39	O		TSG 3	55	O		XPN
8	O		ACS	24		O	PND	40		O	GND	56		O	AS6
9		O	DO 0	25		O	AS5	41		O	H40	57		O	AS4
10		O	CFS A	26		O	AS3	42		O	H80	58		O	AS2
11		O	CFS B	27		O	AS1	43		O	H160	59		O	DCLK
12		O	CFS C	28		O	DATA	44		O	DO1	60		O	CAL
13		O	CFS D	29	O		FRE	45		O	DO2	61	O		VDD(+5V)
14		O	FLD	30	O		CTL I	46		O	DO3	62	O		SLTC
15		O	AD 0	31	O		TC IN	47	O		VDD(+5V)	63	O		TPN
16		O	AD 2	32		O	OVF	48		O	AD 1	64	O		TEST



MODE SELECT

SLCT	SLTC	MODE
0	0	AUTO
0	1	TIME CODE
1	0	CTL
1	1	AUTO

CTL COUNT

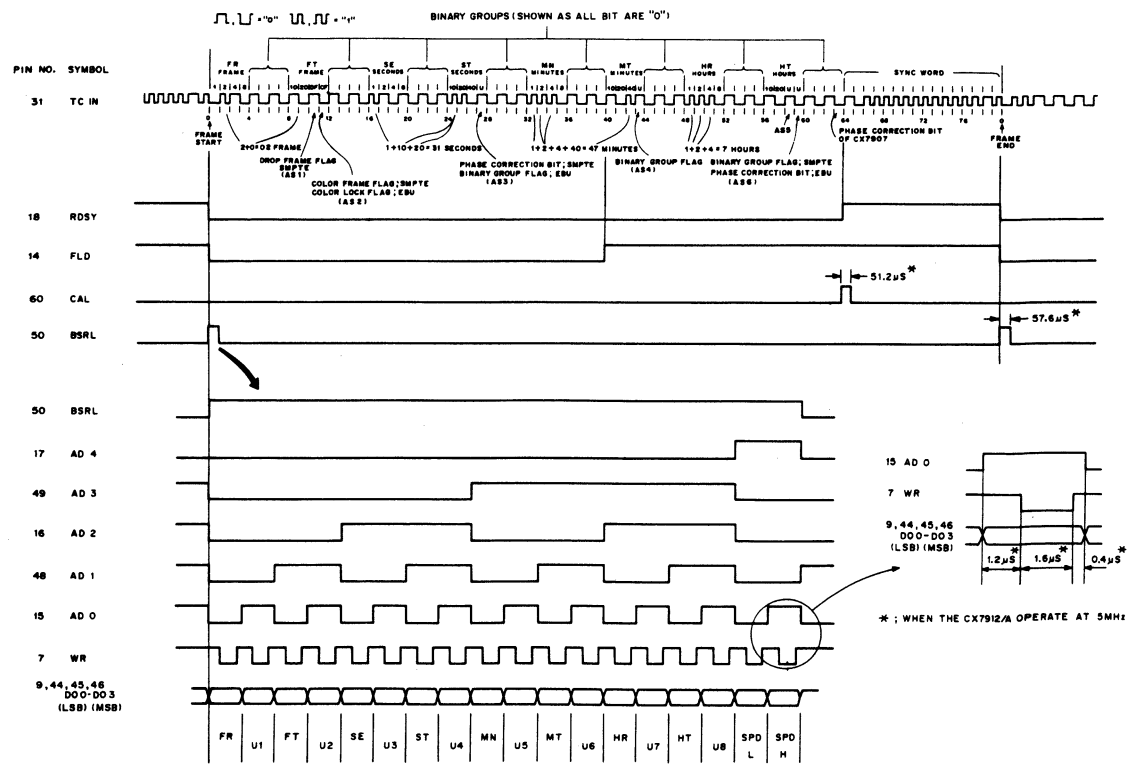
FRE	RSTI	COUNT
0	X	DOWN COUNT
1	X	UP COUNT
X	⌐	RESET

SIGNAL FORMAT SELECT

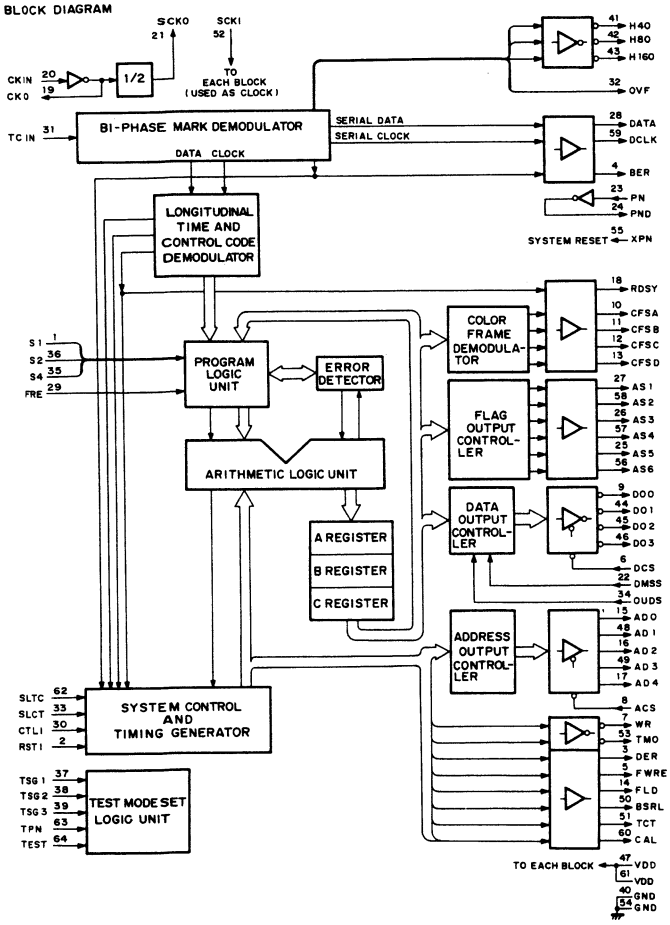
S4	S2	S1	FORMAT	FRAME
0	0	0	FILM	24
0	0	1	NOT ALLOWED	—
0	1	0		
0	1	1		
1	0	0	PAL, SECAM	25
1	0	1	NOT ALLOWED	—
1	1	0	NTSC (NON DROP FRAME)	30
1	1	1	NTSC (DROP FRAME)	30

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TIMING CHART



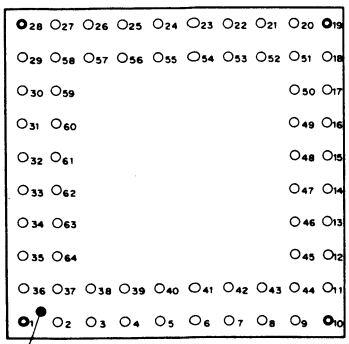
BLOCK DIAGRAM



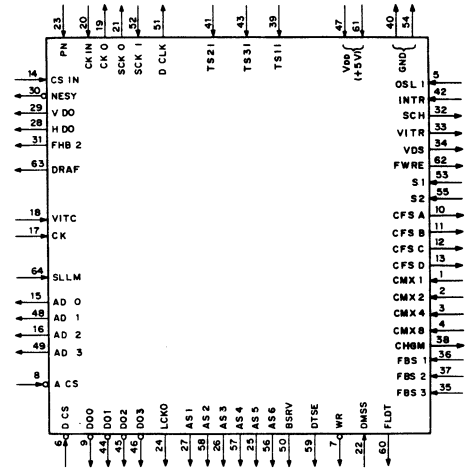
FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE OUTPUT ENABLE (NEGATIVE-LOGIC)
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
17	AD4	
27	AS1	PARALLEL DATA OUTPUT
58	AS2	
26	AS3	
57	AS4	
25	AS5	
56	AS6	
4	BER	BI-PHASE MARK ERROR (BIT ERROR) OUTPUT
50	BSRL	DATA OUT FLAG OUTPUT
60	CAL	CALCULATE OUT FLAG OUTPUT
10	CFSA	DEMODULATED COLOR FRAME OUTPUT
11	CFSB	
12	CFSC	
13	CFSD	
20	CKIN	CLOCK INPUT
19	CKO	CLOCK OUTPUT (NEGATIVE-LOGIC)
30	CTLI	CTL SIGNAL INPUT (↓)
28	DATA	DEMODULATED SERIAL DATA OUTPUT
59	DCLK	DEMODULATED CLOCK OUTPUT
6	DCS	DATA LINE OUTPUT ENABLE (NEGATIVE-LOGIC)
3	DER	DEMODULATE DATA ERROR OUTPUT
22	DMSS	ASSIGNED DATA SELECT
9	DO0	DATA OUTPUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
14	FLD	FIELD DATA OUTPUT
29	FRE	CTL DIRECTION SIGNAL INPUT
5	FWRE	DEMODULATE DIRECTION SIGNAL OUTPUT
41	H4O	SPEED RANGE FLAG 4 OUTPUT (NEGATIVE-LOGIC)
42	H8O	SPEED RANGE FLAG 8 OUTPUT (NEGATIVE-LOGIC)
43	H16O	SPEED RANGE FLAG 16 OUTPUT (NEGATIVE-LOGIC)
34	OUDS	ERROR BYPASS ON/OFF SELECT
32	OVF	OVERFLOW FLAG OUTPUT
23	PN	POWER ON SIGNAL INPUT
24	PND	POWER ON SIGNAL OUPUT (NEGATIVE-LOGIC)
18	RDSY	READ SYNC WORD DATA OUTPUT
2	RSTI	CTL TIMER RESET INPUT (↓)
1	S1	SIGNAL FORMAT SELECT S1
36	S2	SIGNAL FORMAT SELECT S2
35	S4	SIGNAL FORMAT SELECT S4
52	SCKI	SYSTEM CLOCK INPUT
21	SCKO	SYSTEM CLOCK OUTPUT
33	SLCT	SELECT CTL INPUT
62	SLTC	SELECT LTC INPUT
55	XPN	SYSTEM RESET SIGNAL INPUT (NEGATIVE-LOGIC)
31	TCIN	LONGITUDINAL TIME AND CONTROL CODE INPUT
51	TCT	INPUT SELECT FLAG OUTPUT
53	TWO	TIME OVER SIGNAL OUTPUT (NEGATIVE-LOGIC)
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
64	TEST	TEST MODE SET INPUT (TO BE CONNECTED WITH GND)
63	TPN	
37	TSG1	
38	TSG2	
39	TSG3	

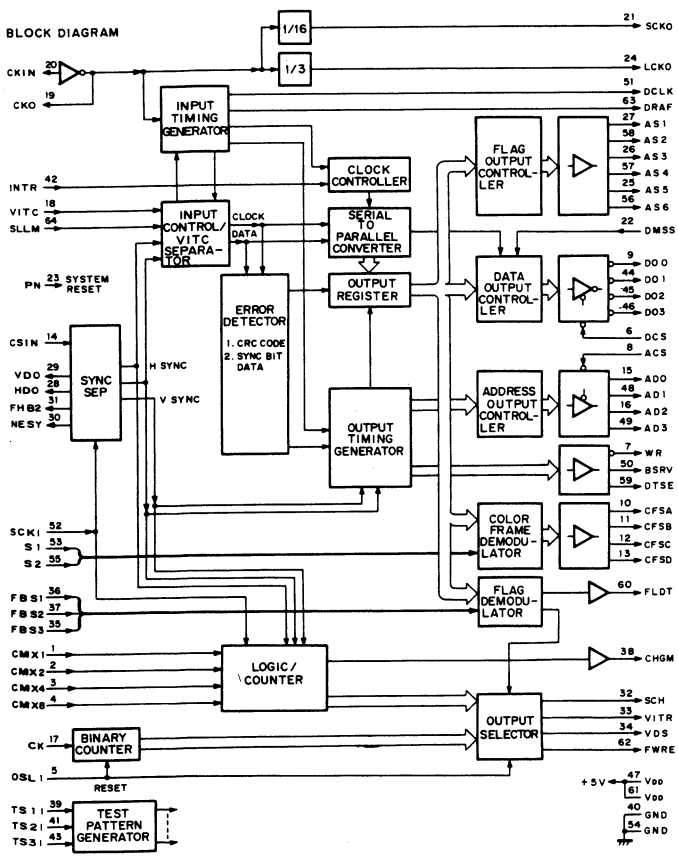
CX7913A (SONY)
C-MOS VITC (VERTICAL INTERVAL TIME CODE) READER
— TOP VIEW —



PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	○		CMX 1	17	○		CK	33		○	VITR	49		○	AD 3
2	○		CMX 2	18	○		VITC	34		○	VDS	50		○	BSRV
3	○		CMX 4	19		○	CK O	35	○		FBS 3	51		○	D CLK
4	○		CMX 8	20	○		CK IN	36	○		FBS 1	52	○		SCK I
5	○		OSL 1	21		○	SCK O	37	○		FBS 2	53	○		S1
6	○		D CS	22	○		DMSS	38		○	CHGM	54		○	GND
7		○	WR	23	○		PN	39	○		TS1I	55	○		S2
8	○		A CS	24		○	LCKO	40		○	GND	56		○	AS6
9		○	DO0	25		○	AS5	41	○		TS2I	57		○	AS4
10		○	CFS A	26		○	AS3	42	○		INTR	58		○	AS2
11		○	CFS B	27		○	AS1	43	○		TS3I	59		○	DTSE
12		○	CFS C	28		○	HDO	44		○	DO1	60		○	FLDT
13		○	CFS D	29		○	VDO	45		○	DO2	61	○		Vdd(+5V)
14	○		CS IN	30		○	NESY	46		○	DO3	62		○	FWRE
15		○	AD 0	31		○	FHB 2	47	○		Vdd(+5V)	63		○	DRAF
16		○	AD 2	32		○	SCH	48		○	AD 1	64	○		SLLM



BLOCK DIAGRAM



FUNCTIONAL PIN DEFINITION

Pin No.	SYMBOL	DESCRIPTION
8	ACS	ADDRESS LINE ENABLE INPUT
15	AD0	ADDRESS DATA OUTPUT
48	AD1	
16	AD2	
49	AD3	
27	AS1	PARALLEL DATA OUTPUT
58	AS2	
26	AS3	
57	AS4	
25	AS5	
56	AS6	
50	BSRV	DATA OUT FLAG OUTPUT
10	CFSA	DEMODULATED COLOR FRAME OUTPUT
11	CFSB	
12	CFSC	
13	CFSD	
38	CHGM	CHARACTER V POSITION GATE SIGNAL OUTPUT
17	CK	INTERNAL COUNTER CLOCK INPUT
20	CKIN	CLOCK INPUT
19	CKO	CLOCK OUTPUT (NEGATIVE-LOGIC)
1	CMX1	CHARACTER V POSITION SELECT INPUT
2	CMX2	
3	CMX4	
4	CMX8	
14	CSIN	COMPOSITE SYNC INPUT
51	DCLK	VITC READ CLOCK OUTPUT
6	DCS	DATA LINE ENABLE INPUT
22	DMSS	ASSIGNED BIT DATA SELECT INPUT
9	DO0	DATA OUT (NEGATIVE-LOGIC)
44	DO1	
45	DO2	
46	DO3	
63	DRAF	VITC SYNCHRONIZE SIGNAL D OUTPUT
59	DTSE	VITC DATA SEARCH FLAG OUTPUT
36	FBS1	FIELD MARK POSITION SELECT 1 INPUT
37	FBS2	FIELD MARK POSITION SELECT 2 INPUT
35	FBS3	FIELD MARK POSITION SELECT 3 INPUT
31	FHB2	FH/2 SIGNAL OUTPUT
60	FLDT	FIELD DATA OUTPUT
62	FWRE	TAPE DIRECTION SIGNAL OUTPUT
28	HDO	HORIZONTAL SYNC DRIVE OUTPUT
42	INTR	INTERRUPT REQUEST INPUT
24	LCKO	LTC CLOCK OUTPUT
30	NESY	LOST-SYNC FLAG OUTPUT
5	OSL1	OUTPUT SIGNAL SELECT 1 INPUT
23	PN	POWER ON RESET INPUT
53	S1	SIGNAL FORMAT SELECT S1 INPUT
55	S2	SIGNAL FORMAT SELECT S2 INPUT
32	SCH	OUTPUT SIGNAL SCH
52	SCKI	SYSTEM CLOCK INPUT
21	SCKO	SYSTEM CLOCK OUTPUT
64	SLLM	READ SIZE SELECT INPUT
29	VDO	VERTICAL SYNC DRIVE OUTPUT
34	VDS	OUTPUT SIGNAL VDS
18	VITC	VITC SIGNAL INPUT
33	VITR	OUTPUT SIGNAL VITR
7	WR	WRITE SIGNAL OUTPUT (NEGATIVE-LOGIC)
47	VDD	POWER LINE (+5V)
61	VDD	
40	GND	GND LINE
54	GND	
39	TS1I	TEST INPUT
41	TS2I	
43	TS3I	

#1,2,3,4 CMX1 TO 8;CHARACTER V POSITION SELECT

CMX8	CMX4	CMX2	CMX1	INSERTION LINE (#38 CHGM IS H LEVEL) NTSC	PAL,SECAM
0	0	0	0	---	---
0	0	0	1	---	284-303 596-615
0	0	1	0	---	264-283 576-595
0	0	1	1	---	244-263 556-575
0	1	0	0	227-246	224-243 536-555
0	1	0	1	207-226	204-223 516-535
0	1	1	0	187-206	184-203 496-515
0	1	1	1	167-186	164-183 476-495
1	0	0	0	147-166	144-163 456-475
1	0	0	1	127-146	124-143 436-455
1	0	1	0	107-126	104-123 416-435
1	0	1	1	87-106	84-103 396-415
1	1	0	0	67- 86	64- 83 376-395
1	1	0	1	47- 66	44- 63 356-375
1	1	1	0	27- 46	24- 43 336-355
1	1	1	1	---	---

#36,37,35 FBS1 TO FBS3;FIELD DATA SELECT

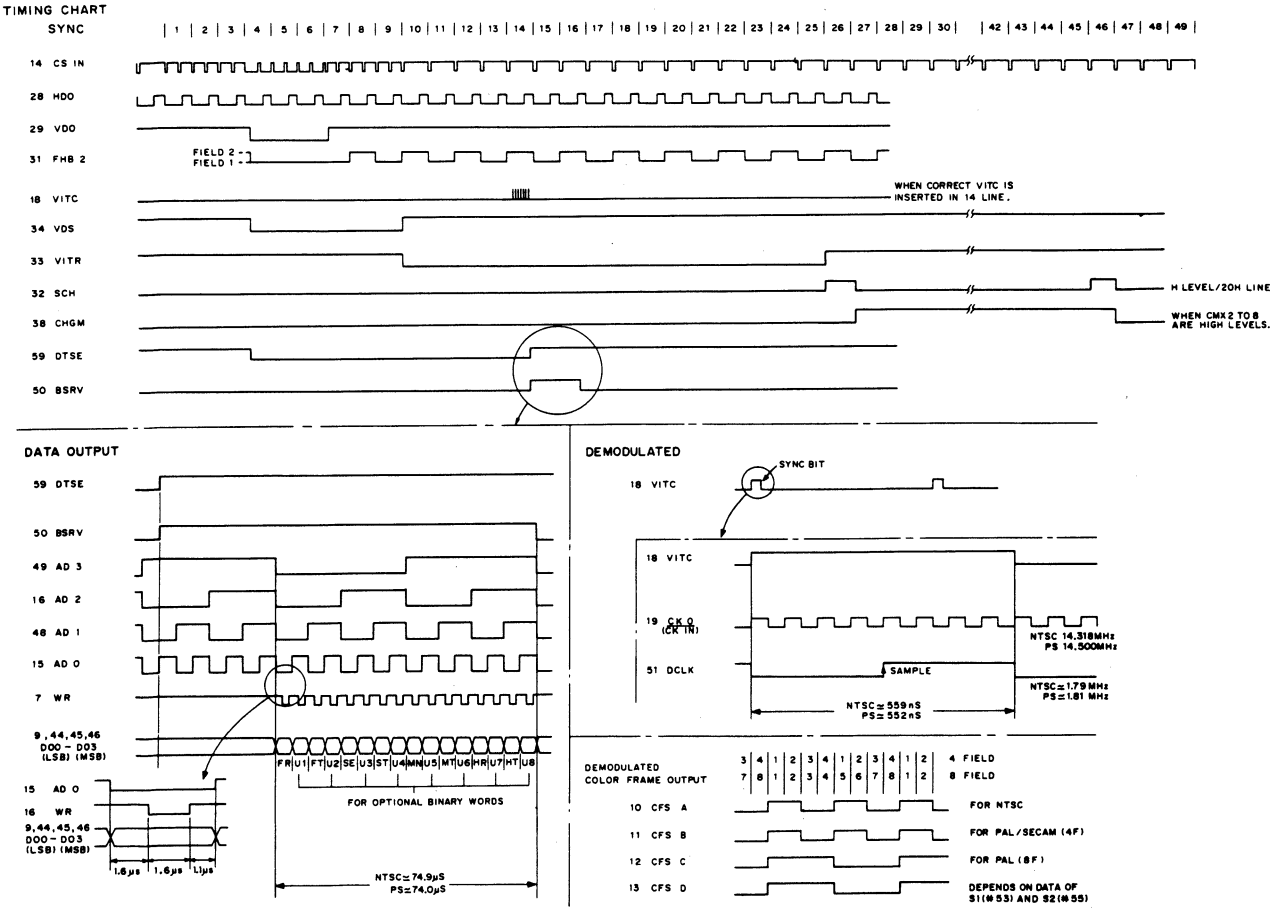
FBS3	FBS2	FBS1	#60 FLDT OUTPUT
0	0	0	AS1 (VITC BIT No.14)
0	0	1	AS2 (VITC BIT No.15)
0	1	0	AS3 (VITC BIT No.35)
0	1	1	AS4 (VITC BIT No.55)
1	0	0	AS5 (VITC BIT No.74)
1	0	1	AS6 (VITC BIT No.75)
1	1	0	------
1	1	1	------

#53,55 S1,S2;SIGNAL FORMAT SELECT

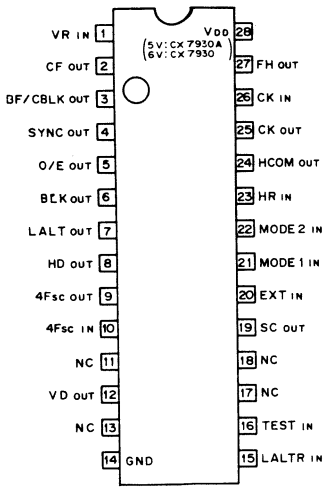
S2	S1	#13 CFSD FORMAT
0	0	UNSPECIFIED
0	1	
1	0	NTSC NON DROP FRAME
1	1	NTSC DROP FRAME

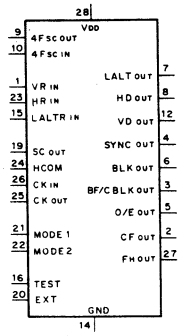
0;LOW LEVEL
1;HIGH LEVEL

TIMING CHART



CX7930A (SONY) FLAT PACKAGE
C-MOS SYNC GENERATOR (NTSC, PAL-M, PAL, SECAM)
— TOP VIEW —





O/E : ODD/EVEN FIELD
CF : COLOR FRAME PULSE
HCOM : H COMPARATOR

SYSTEM	4Fsc	CLOCK
NTSC	910 FH	910FH
PAL	1135FH+2Fv	908FH
PALM	909FH	910FH
SECAM	———	908FH

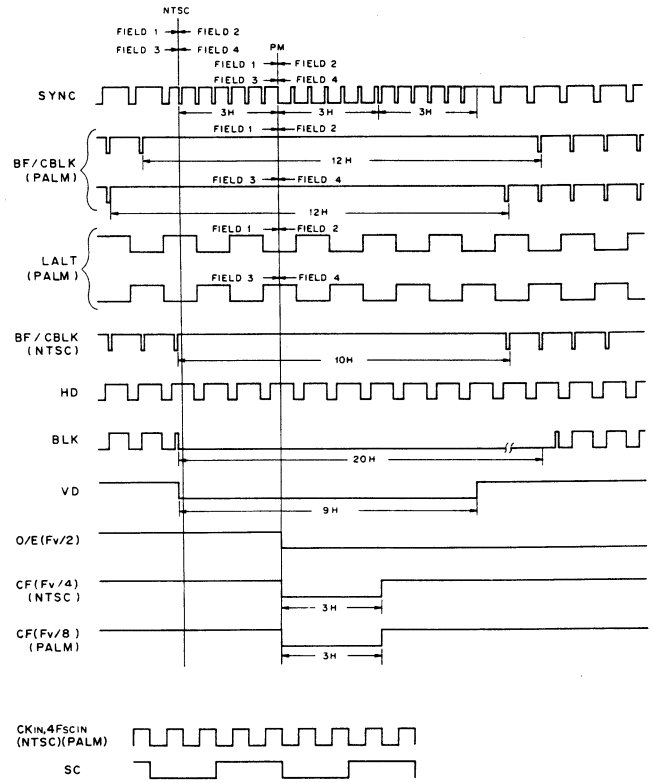
INPUTS		SYSTEM
MODE 1	MODE 2	
0	0	NTSC
0	1	SECAM
1	0	PALM
1	1	PAL

0 ; LOW LEVEL (GND)
1 ; HIGH LEVEL (VDD)

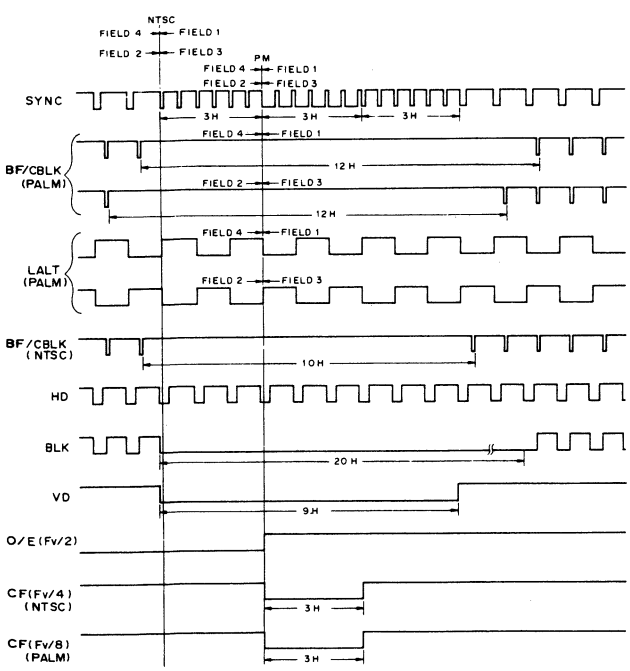
INPUTS		FUNCTION
EXT	TEST	
0	0	INTERNAL
0	1	INVALID
1	0	EXT
1	1	TEST

TEST "0": OPEN
(INTERNALLY PULLED DOWN)

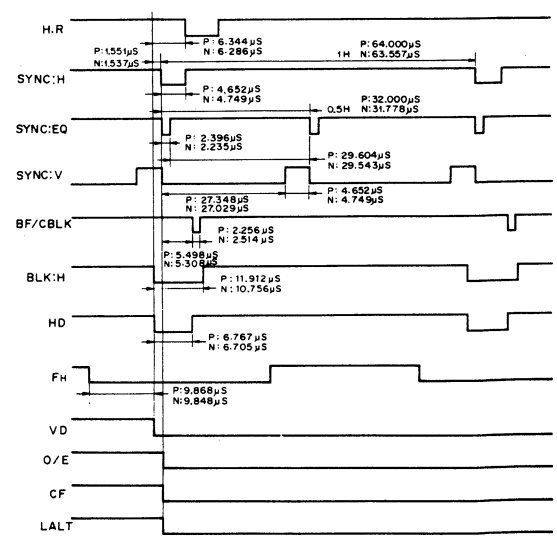
NTSC, PAL-M (FIELD 2, 4)



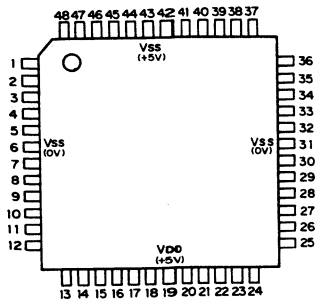
NTSC, PAL-M (FIELD 1, 3)



P: PAL, SECAM
N: NTSC, PALM

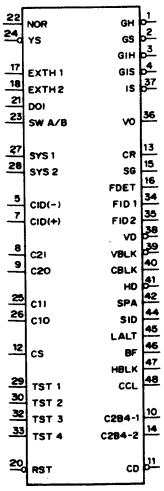


CX7993A (SONY) FLAT PACKAGE
C-MOS TIMING GENERATOR
— TOP VIEW —

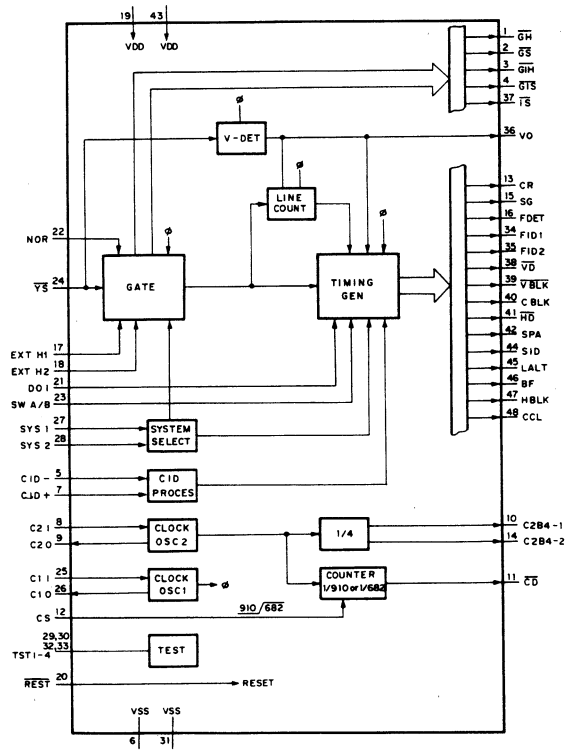


PIN ASSIGNMENT

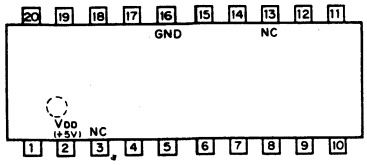
PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		O	$\overline{GH}$	13		O	CR	25	O		C11	37		O	$\overline{IS}$
2		O	$\overline{GS}$	14		O	C2B4-2	26		O	C10	38		O	$\overline{VD}$
3		O	$\overline{GIH}$	15		O	SG	27	O		SYS 1	39		O	$\overline{VBLK}$
4		O	$\overline{GIS}$	16		O	FDET	28	O		SYS 2	40		O	CBLK
5	O		CID −	17	O		EXTH 1	29			T1	41		O	$\overline{HD}$
6			Vss	18	O		EXTH 2	30			T2	42		O	SPA
7	O		CID +	19			VDD	31			Vss	43			VDD
8	O		C21	20	O		$\overline{RST}$	32			T3	44		O	SID
9		O	C20	21	O		DOI	33			T4	45		O	LALT
10		O	C2B4-1	22	O		NOR	34		O	FID 1	46		O	BF
11		O	$\overline{CD}$	23	O		SW A/B	35		O	FID 2	47		O	HBLK
12	O		CS	24	O		$\overline{YS}$	36		O	VO	48		O	CCL



BF	;	BURST FLAG OUT
C1I	;	CLOCK 1 IN
C1O	;	CLOCK 1 OUT
C2B4-1	;	CLOCK 2/4-1
C2B4-2	;	CLOCK 2/4-2
C2I	;	CLOCK 2 IN
C2O	;	CLOCK 2 OUT
CBLK	;	CHROMA BLANKING PULSE OUT
CCL	;	CHROMA CLAMP
CD	;	COUNT DOWN SIGNAL
CID+, CID−	;	CHROMA ID +,− IN
CR	;	CORRECT SYNC OUT
CS	;	COUNTER SELECT IN
EXTH 1	;	EXTERNAL H-1
EXTH 2	;	EXTERNAL H-2
FDET	;	FRAME DET OUT
FID1 FID2	;	FRAME ID 1,2 OUT
GH	;	GATED H OUT
GIH	;	GATE/INTERPORATED H OUT
GIS	;	GATE/INTERPORATED SYNC OUT
GS	;	GATED SYNC OUT
HBLK	;	H-BLANKING PULSE OUT
HD	;	HD OUT
IS	;	INTERPORATED SYNC OUT
LALT	;	LINE ALTERNATE OUT
NOR	;	MODE SELECT(NORMAL/SERCH) IN
RST	;	RESET IN
SG	;	SYNC GATE OUT
SID	;	SECAM ID OUT
SPA	;	SECAM PHASE ALTERNATE OUT
SW A/B	;	Y SWITCHING PULSE A/B IN
SYS1, SYS2	;	SYSTEM SELECT 1,2 IN
TST1, TST2	;	TEST1, TEST2
VBLK	;	V-BLANKING PULSE OUT
VD	;	VD OUT
VO	;	V OUT
YS	;	Y SYNC OUT

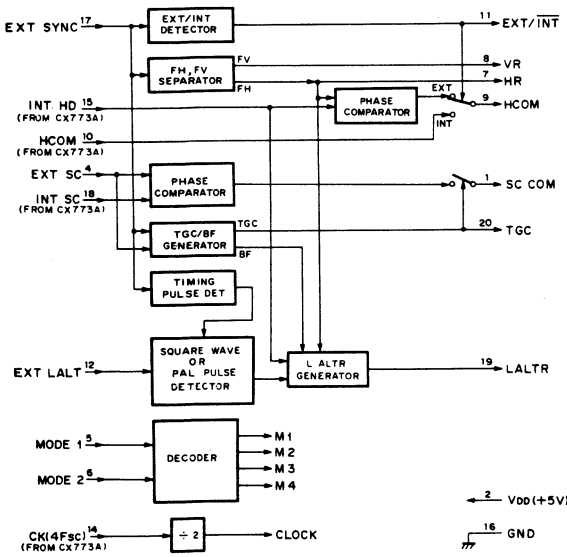


CX7998 (SONY) FLAT PACKAGE
C-MOS GENLOCK DRIVER FOR CX773A
— TOP VIEW —

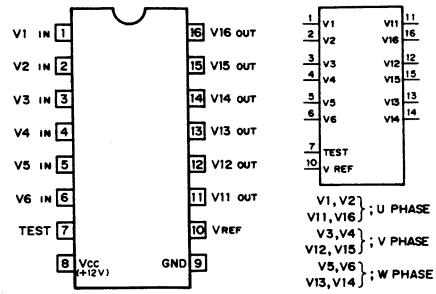


INPUTS		EXT LOCK MODE	
MODE 1	MODE 2		
0	0	M 1	PAL:VBS
1	0	M 2	PAL-M:VBS
0	1	M 3	PAL:VS/SC/LALT
			SECAM:VS/SC/LALT
1	1	M 4	NTSC:VBS
			NTSC:VS/SC
			PAL-M:VS/SC/LALT

0; LOW LEVEL
1; HIGH LEVEL

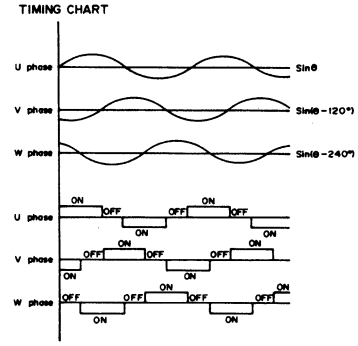


CX877 (SONY)
MOTOR DRIVER
— TOP VIEW —

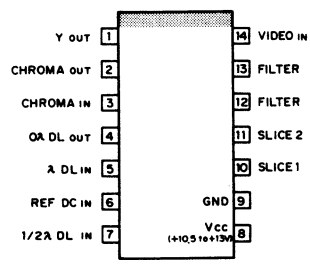


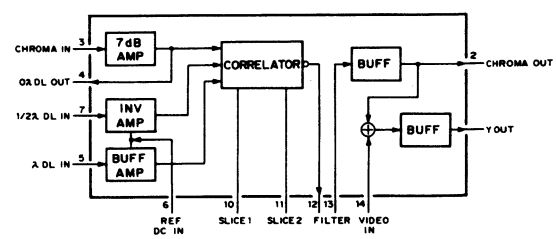
V1, V2, V11, V16 ; U PHASE
V3, V4, V12, V15 ; V PHASE
V5, V6, V13, V14 ; W PHASE

TIMING CHART

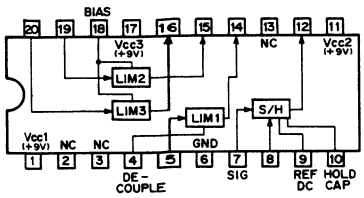


CXA1020P (SONY)
CHROMA CROSS-COLOR NOISE REDUCER/EDGE COMPENSATOR
— TOP VIEW —

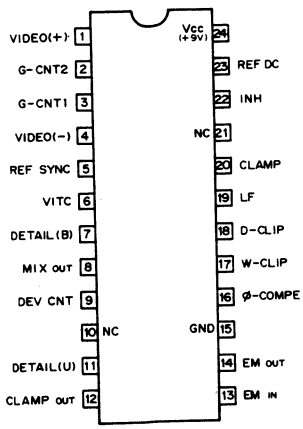


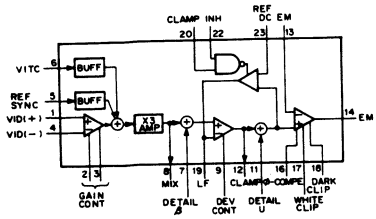


CXA1039M (SONY) PLAT PACKAGE
DETAIL ENHANCER LIMITER
— TOP VIEW —

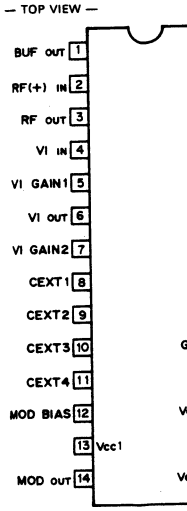


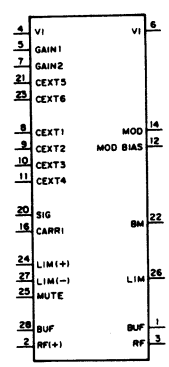
CXA1040M (SONY) MINI FLAT PACKAGE
VIDEO SIGNAL PROCESSOR
— TOP VIEW —





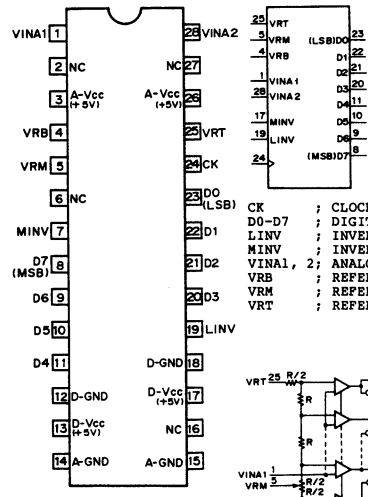
CXA1041M (SONY) MINI FLAT PACKAGE
FM MODULATOR
— TOP VIEW —



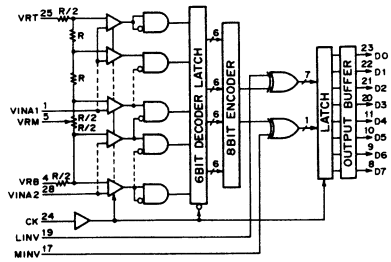


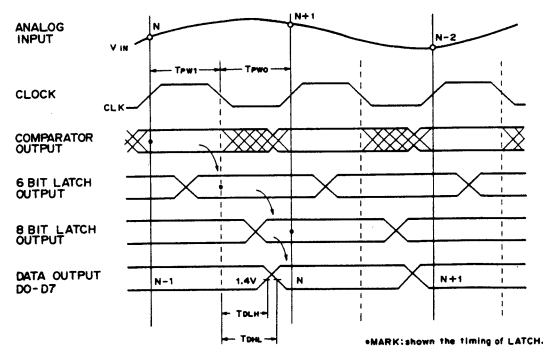
BM OUT	;	BALANCED MODULATOR OUTPUT
BUF IN/OUT	;	BUFFER INPUT/OUTPUT
CEXT 1-6	;	CURRENT MILLER EXIT 1-6
LIM IN/OUT	;	LIMITER INPUT/OUTPUT
MOD BIAS	;	MODULATOR BIAS
MUTE IN	;	MUTE INPUT
RF IN/OUT	;	RF INPUT/OUTPUT
SIG IN	;	BALANCED MODULATOR SIGNAL INPUT

CXA1096M (SONY) FLAT PACKAGE
8-BIT 20MSPS FLASH A/D CONVERTER (TTL INPUT/OUTPUT)
— TOP VIEW —

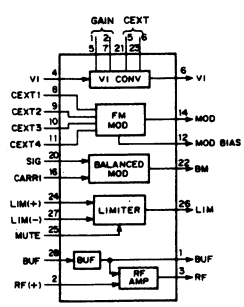


CK	;	CLOCK INPUT
D0-D7	;	DIGITAL DATA OUTPUTS
LINV	;	INVERT SIGNAL of D0-D6
MINV	;	INVERT SIGNAL of D7
VINA1, 2	;	ANALOG VIDEO SIGNAL 1, 2
VRB	;	REFERENCE VOLTAGE (BOTTOM)
VRM	;	REFERENCE VOLTAGE (MIDDLE)
VRT	;	REFERENCE VOLTAGE (TOP)

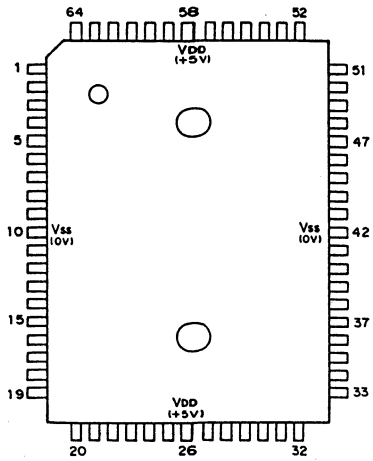




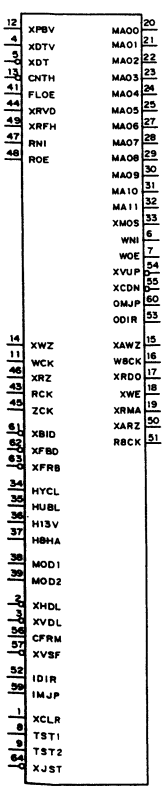
*MARK:shown the timing of LATCH.



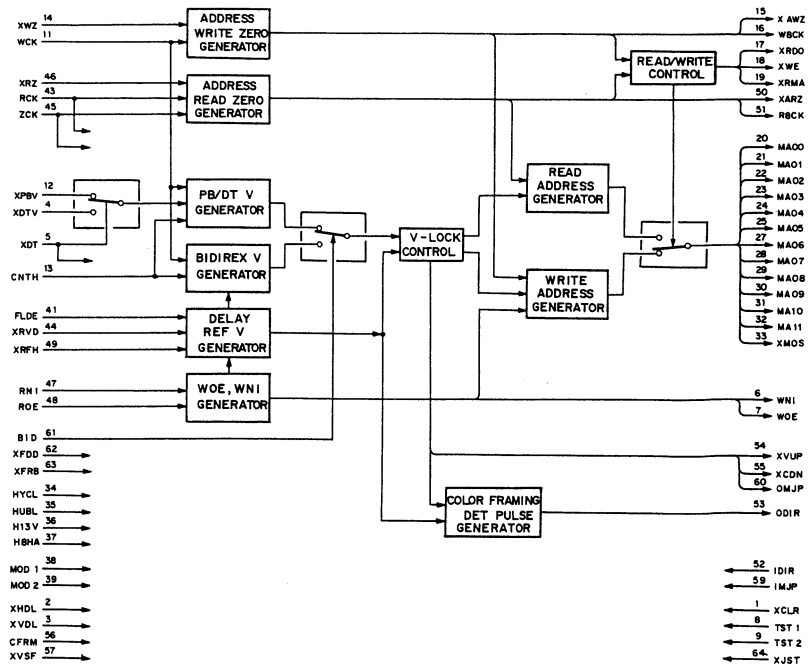
CXD1022CQ (SONY) FLAT PACKAGE
C-MOS TBC
— TOP VIEW —



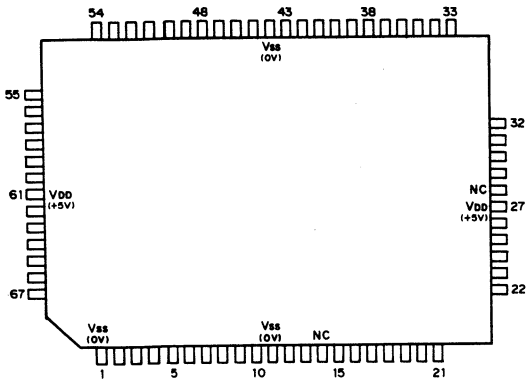
PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1	O		XCLR	17		O	XRDO	33		O	XMOS	49	O		XRFH
2	O		XHDL	18		O	XWE	34	O		HYCL	50		O	XARE
3	O		XVDL	19		O	XRMA	35	O		HUBL	51		O	R8CK
4	O		XDTV	20		O	MA00	36	O		H13V	52	O		IDIR
5	O		XDT	21		O	MA01	37	O		H8HA	53		O	ODIR
6		O	WNI	22		O	MA02	38	O		MOD1	54		O	XVUP
7		O	WOE	23		O	MA03	39	O		MOD2	55		O	XCDN
8	O		TST1	24		O	MA04	40		O	HEE	56	O		CFRM
9	O		TST2	25		O	MA05	41	O		FLOE	57	O		XVSF
10			Vss	26			VDD	42			Vss	58			VDD
11	O			27		O	MA06	43	O			59	O		IMJP
12	O		XPBV	28		O	MA07	44	O		XRVD	60		O	CMJP
13	O		CNTH	29		O	MA08	45	O			61	O		XBID
14	O			30		O	MA09	46	O			62	O		XFBD
15	O	O	XAWZ	31		O	MA10	47	O			63	O	O	XFRB
16		O	W8CK	32		O	MA 11	48	O			64	O		XJST



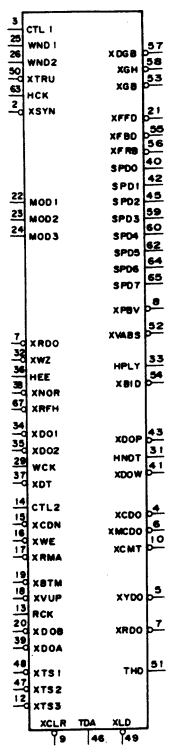
CFRM;	COLOR FRAMING IN
CNTH;	COUNTER-H IN
FLOE;	REF FIELD O/E IN
H13V;	H; 13V-LOCK/ L; 15V-LOCK IN
H8HA;	H; 8H ADVANCE/ L; 16H ADVANCE IN
HEE;	H; EE OUT
HUBL;	H; U MATIC/ L; BETACAM IN
HYCL;	H; Y-ch/L; C-ch IN
IDIR;	H; DIRECT/ L; PROCESS IN
IMJP*;	L; V-LOCK 2H-DELAY IN
MA00-11;	MEMORY ADDRESS 2^-2", OUT
MOD1, 2**;	MODE SELECT IN
ODIR*;	COLOR FRAME ID DETECT PULSE OUT
OMJP*;	L; MEMORY JUMP OUT
R8CK;	READ 8 CLOCK OUT
RCK;	READ CLOCK IN
RNI;	REF LINE N/I IN
ROE;	REF LINE O/E
TST1, 2;	TEST 1, 2 IN
W8CK;	WRITE 8 CLOCK OUT
WCK;	WRITE CLOCK IN
WNI;	WRITE LINE N/I IN
WOE;	WRITE LINE O/E
XARZ;	ADDRESS READ ZERO OUT
XAWZ;	ADDRESS WRITE ZERO OUT
XBID;	L; BIDIREX IN
XCDN;	L; C-ch V-LOCK DOWN OUT
XCLR;	CLEAR IN
XDT;	L; DT IN
XDTV;	DT V-SYNC
XFBD;	L; FAST BIDIREX IN
XFRB;	L; FAST REVERSE BIDIREX IN
XHDL;	L; H DELAY IN
XJST;	L; COMPOSITE IN
XMOS;	MEMORY ADDRESS 2" OUT
XPBV;	PB V-SYNC
XRDO;	READ DO DATA OUT
XRFH;	REF FH IN
XRMA;	READ MAIN DATA OUT
XRVD;	REF VD IN
XRZ;	READ ZERO IN
XVDL;	L; VIDEO DELAY IN
XVSF;	L; V-LOCK SHIFT IN
XVUP;	L; V-LOCK UP OUT
XWE;	WRITE ENABLE OUT
XWZ;	WRITE ZERO IN
ZCK;	ZERO CLOCK IN



CXD1023AQ (SONY) FLAT PACKAGE
C-MOS TBC
— TOP VIEW —

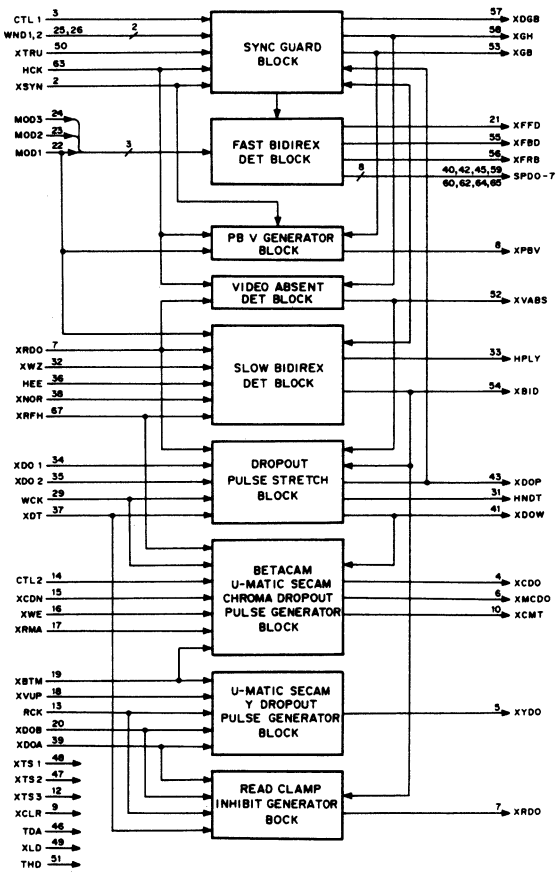


PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1			Vss	21		○	XFFD	41	○	○	XDOW	61			VDD
2	○		XSYN	22	○		MOD1	42		○	SPD6	62		○	SPD2
3	○		CTL1	23	○		MOD2	43	○	○	XDOP	63	○		HCK
4		○	XCDO	24	○		MOD3	44			Vss	64		○	SPD1
5		○	XYDO	25	○		WND1	45		○	SPD5	65		○	SPDO
6	○	○	XMCDO	26	○		WND2	46	○		TDA	66	○		XRVD
7		○	XRDO	27			VDD	47	○		XTS1	67	○		XRFH
8		○	XPBV	28	—	—	—	48	○		XTS2				
9	○		XCLR	29	○		WCK	49	○		XLD				
10		○	XCMT	30	—	—	—	50	○		XTRU				
11			Vss	31		○	HNDT	51		○	THD				
12	○		XTS3	32	○		XWZ	52	○	○	XVABS				
13	○		RCK	33		○	HPLY	53	○	○	XGB				
14	○		CTL2	34	○		XDO1	54	○	○	XBID				
15	○		XCDN	35	○		XDO2	55	○	○	XFBD				
16	○		XWE	36	○		HEE	56	○	○	XFRB				
17	○		XRMA	37	○		XDT	57		○	XDGB				
18	○		XVUP	38	○		XNOR	58	○	○	XGH				
19	○		XBTM	39	○		XDOA	59		○	SPD4				
20	○		XDOB	40		○	SPD7	60		○	SPD3				

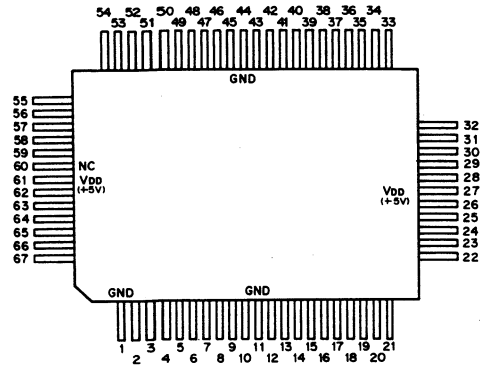


CTL1,2; CTL1,2 IN
HCK; 910 CLOCK IN
HEE; EE IN
HNDT; NORMAL PLAY/DT PLAY OUT
HPLY; PLAY OUT
MOD1; MODE 1 IN (525/625)
MOD2; MODE 2 IN (U-MATIC/BETACAM)
MOD3; MODE 3 IN (/U-MATIC +BETACAM)
RCK; READ CLOCK IN
SPDO; PLAYBACK SPEED 20 OUT

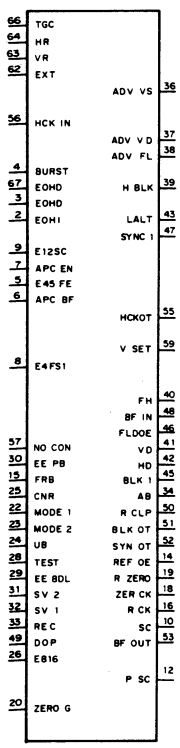
SPD7; PLAYBACK SPEED 27 OUT
TDA; TEST DATA IN
THD; TEST HD OUT
WCK; WRITE CLOCK IN
WND1,2; SYNC GUARD WINDOW 1,2 IN
XBID; BIDIREX IN/OUT
XBTH; BOTTOM LINE SIGNAL IN (SECAM)
XCDN; DROPOUT CHROMA 1H SHIFT DOWN IN (SECAM)
XCDO; DROPOUT CHROMA PULSE OUT (SECAM)
XCLR; CLEAR IN
XCMT; CHROMA MUTE OUT (BETACAM ENCODER)
XDGB; DROPOUT PULSE OUT (BETACAM CHROMA)
XDO1,2; DROPOUT PULSE 1,2 IN
XDOA,B; READ SIDE DROPOUT PULSE A,B IN
XDOP; DROPOUT PULSE STRETCH IN/OUT
XDOW; DROPOUT PULSE STRETCH IN/OUT (NOR/DT PLAYBACK ONLY)
XDT; DT IN
XFBD; FAST BIDIREX IN/OUT
XFFD; F-FORWARD OUT
XFRB; FAST REVERSE BIDIREX IN/OUT
XGB; GUARD BAND IN/OUT
XGH; GUARD H IN/OUT
XLD; TEST DATA LOAD IN
XMCDO; DROPOUT CHROMA MEMORY DATA IN/OUT (SECAM)
XNOR; NORMAL FWD IN
XPBV; PB VIDEO OUT
XRDO; READ CLAMP INHIBIT SIGNAL OUT
XRFH; REF FH IN
XRMA; DROPOUT CHROMA OF MEMORY SIGNAL IN (SECAM)
XRVD; REF VD IN
XSYN; PB SYNC IN
XTRU; SYNC GUARD THROUGH MODE IN
XTS1-3; TEST 1-3 IN
XVABS; VIDEO ABSENT IN/OUT
XVUP; V LOCK UP
XWE; WRITE IN
XWZ; WRITE ZERO IN
XYDO; DROPOUT Y PULSE OUT (SECAM)



CXD1024Q (SONY)
C-MOS TIMING PULSE GENERATOR FOR TBC
— TOP VIEW —

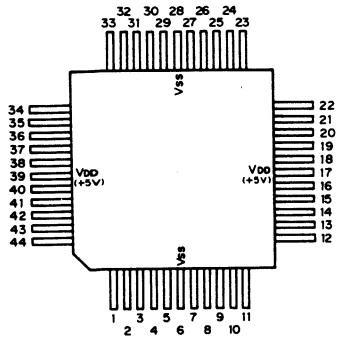


PIN NO.	IN/OUT	SYMBOL	PIN NO.	IN/OUT	SYMBOL	PIN NO.	IN/OUT	SYMBOL	PIN NO.	IN/OUT	SYMBOL
1	–	GND	18	O	ZEROK	35	O	WVCRZ	52	O	SYNOT
2	I	EOHI	19	O	RZERO	36	O	ADVVS	53	O	BFOUT
3	O	EOHO	20	I	ZEROG	37	I	ADVVD	54	O	ESPLD
4	I	BURST	21	O	E14CK	38	I	ADVFL	55	O	HCKOT
5	O	E45FE	22	I	MODE1	39	O	HBLK	56	I	HCKIN
6	O	APCBF	23	I	MODE2	40	I	FH	57	I	NOCON
7	I	APCEN	24	I	UB	41	I	VD	58	O	LALST
8	I	E4FSI	25	I	CNR	42	I	HD	59	O	V SET
9	O	E12SC	26	I	E8I6	43	I	ALT	60		
10	O	SC	27	–	VDD	44	–	VSS	61	–	VDD
11	–	GND	28	I	TEST	45	I	BLKI	62	I	EXT
12	O	PSC	29	I	EE8DL	46	I	FLDOE	63	I	VR
13	O	REFNI	30	I	EEPB	47	I	SYNCI	64	I	HR
14	O	REFOE	31	I	SV2	48	I	BFIN	65	I	LALTR
15	I	FRB	32	I	SV1	49	I	DOP	66	I	TGC
16	O	ROK	33	I	REC	50	I	RCLP	67	O	EOHD
17	O	HRCR	34	I	AB	51	I	BLKOT			

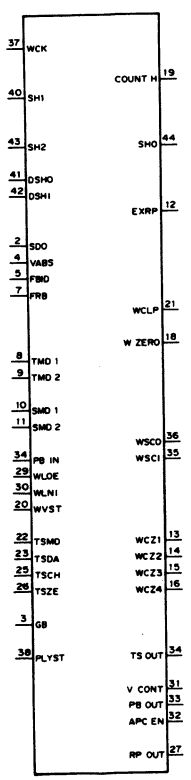



```
AB      ; ADVANCE SYNC V PHASE CONTROL
ADVFL   ; ADVANCE SYNC FIELD O/E OUT
ADVVD   ; ADVANCE SYNC VD OUT
ADVVS   ; ADVANCE SYNC V SET PULSE OUT
APCBF   ; APC BURST FLAG
APCEN   ; APC ENABLE
BF IN   ; BF IN
BF OUT  ; BF OUT
BLKI    ; BLANKING IN
BLKOT   ; BLANKING OUT
BURST   ; BURST
DOP     ; CLAMP PULSE INHIBIT
E 12SC  ; 1/2 SC OUT
E 14SC  ; 1/4 SC OUT
E4FSI   ; 4 FSC IN
E45FE   ; 4/5 FSC OUT
E 8/6   ; 16/32
EE8DL   ; 8H DELAY
EEPB    ; ADVANCE OFF
EOHD    ;   HD
EOHI    ;   H IN
EOHO    ;   H OUT
ESPLD   ; LINE DO
EXT     ; EXT
FH      ; FH
FLDOE   ; FIELD O/E
FRB     ; FIRST REVERSE BIDIREX
HBLK    ; H BLANKING PULSE
HCK IN  ; HCK IN
HCK OT  ; HCK OUT
HD      ; HD
HR      ; HR
HRCK    ; 1/2 READ CK
LALST   ; LINE ALTERNATE SET
LALT    ; LINE ALTERNATE
LALTR   ; LINE ALTERNATE RESET
MODE 1  ; MODE 1
MODE 2  ; MODE 2
NOCON   ; CONF1
PSC     ; PROCESS SC OUT
RCLP    ; READ CLAMP PULSE
REC     ; REC
REFNI   ; REF N/I
REFOE   ; REF O/E
RCK     ; READ CK
RZERO   ; READ ZERO
SC      ; SC OUT
SV 1    ; SV 1
SV 2    ; SV 2
SYNCI   ; SYNC IN
SYNOT   ; SYNC OUT
TEST    ; TEST
TGC     ; TGC
UB      ; Umatic/Betacam
VD      ; VD
VR      ; V RESET
V SET   ; V SET
WVCRZ   ; CHROMA READ ZERO
SEROK   ; ZERO CK
ZEROG   ; ZERO GATE
```

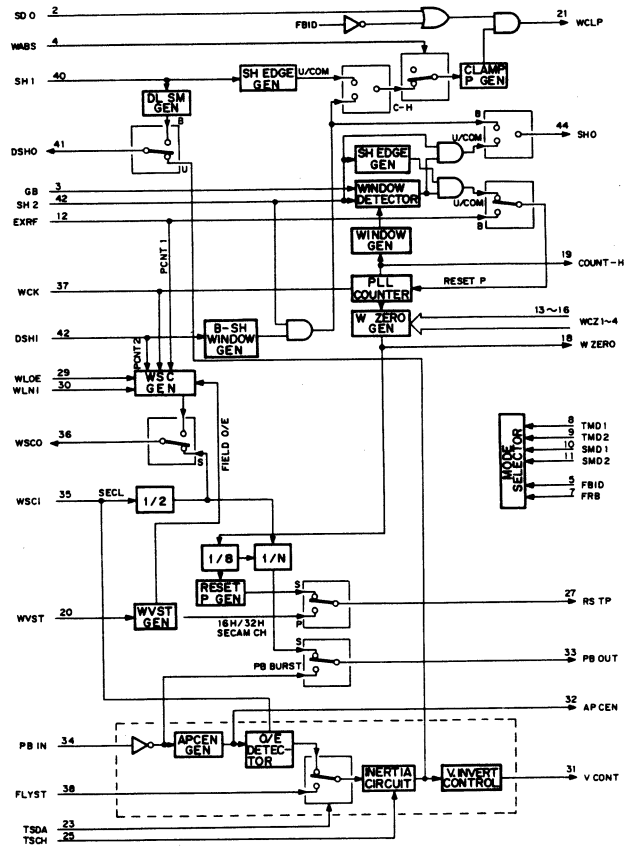
CXD1045Q (SONY)
C-MOS PLL COUNTER FOR TBC (WRITE CLOCK)
— TOP VIEW —



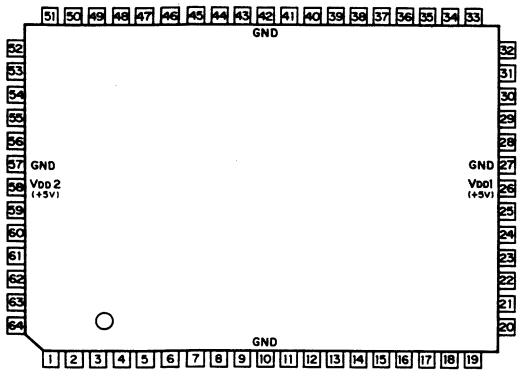
PIN NO.	IN/OUT	SYMBOL	PIN NO.	IN/OUT	SYMBOL	PIN NO.	IN/OUT	SYMBOL	PIN NO.	IN/OUT	SYMBOL
1	I	Vss2	12	I	EXRP	23	I	TSDA	34	I	PBIN
2	I	SDO	13	I	WCZ1	24	I	TSOUT	35	I	WSCI
3	I	GB	14	I	WCZ2	25	I	TSCH	36	O	WSCO
4	I	VABS	15	I	WCZ3	26	I	TSZE	37	I	WCK
5	I	FBID	16	I	WCZ4	27	O	RPOUT	38	I	PLYST
6	I	Vss	17	–	Vdd	28	–	Vss	39	–	Vdd
7	I	FRB	18	O	WZERO	29	I	WLOE	40	I	SH1
8	I	TMD 1	19	O	COUNT H	30	I	WLNI	41	O	DSHO
9	I	TMD 2	20	I	WVST	31	O	V CONT	42	I	DSHI
10	I	SMD 1	21	O	WCLP	32	O	APC EN	43	I	SH2
11	I	SMD 2	22	I	TSMD	33	O	PBOUT	44	O	SHO



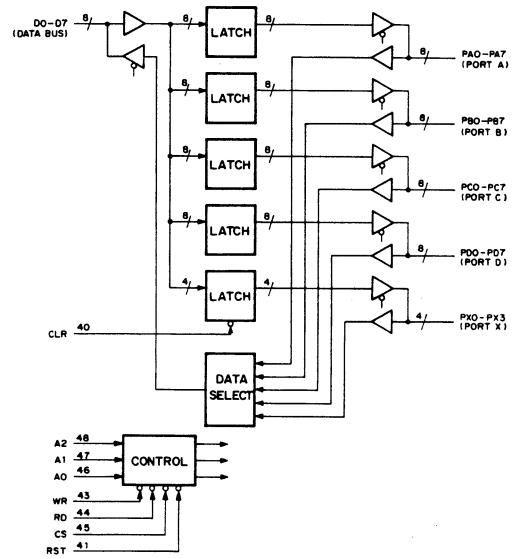
APC EN ; APC ENABLE
COUNT H; COUNTER H
DSHI ; DELAYED SH IN
DSHO ; DELAYED SH OUT
EXRP ; EXT RESET PULSE
F BID ; FAST BIDIREX
FR B ; FAST REVERSE BIDIREX
GH ; GATED H
PB IN ; PB BURST IN
PB OUT ; PB BURST OUT
PLYST ; PLAY STATUS
RP OUT ; RESET PULSE OUT
SDO ; STRETCHED DOROP OUT
SHO ; SELECTED H OUT
SH1 ; SELECTED H1
SH2 ; SELECTED H2
SMD1 ; S MODE 1
SMD2 ; S MODE 2
TMD1 ; T MODE 1
TMD2 ; T MODE 2
TSCH ; TEST COUNTER H
TSDA ; TEST DATA IN
TSMD ; TEST MODE
TSOUT ; TEST OUT
TSZE ; TEST W ZERO
VABS ; VIDEO ABSENT
V CONT ; V AXIS CONTROL
WCK ; WRITE CLOCK
WCLP ; WRITE CLAMP PULSE
WCZ1 ; WRITE ZERO CONTROL 1
WCZ2 ; WRITE ZERO CONTROL 2
WCZ3 ; WRITE ZERO CONTROL 3
WCZ4 ; WRITE ZERO CONTROL 4
WLNI ; WRITE LINE N/I
WLOE ; WRITE LINE O/E
WSCI ; WRITE SC IN
WSCO ; WRITE SC OUT
WVST ; WRITE V SET
W ZERO ; WRITE ZERO

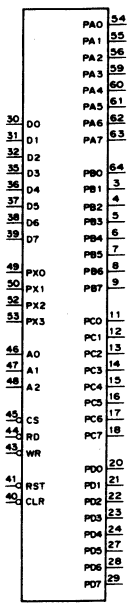


CXD1095Q (SONY) FLAT PACKAGE
C-MOS I/O PORT EXPANDER
— TOP VIEW —



PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1			NC	17	O	O	PC6	33			NC	49	O	O	PX0
2			NC	18	O	O	PC7	34			NC	50	O	O	PX1
3	O	O	PB1	19			NC	35	O	O	D3	51			NC
4	O	O	PB2	20	O	O	PD0	36	O	O	D4	52	O	O	PX2
5	O	O	PB3	21	O	O	PD1	37	O	O	D5	53	O	O	PX3
6	O	O	PB4	22	O	O	PD2	38	O	O	D6	54	O	O	PA0
7	O	O	PB5	23	O	O	PD3	39	O	O	D7	55	O	O	PA1
8	O	O	PB6	24	O	O	PD4	40	O		CLR	56	O	O	PA2
9	O	O	PB7	25			GND	41	O		RST	57			GND
10			GND	26	O		VDD(+5V)	42			GND	58	O		VDD(+5V)
11	O	O	PC0	27	O	O	PD5	43	O		WR	59	O	O	PA3
12	O	O	PC1	28	O	O	PD6	44	O		RD	60	O	O	PA4
13	O	O	PC2	29	O	O	PD7	45	O		CS	61	O	O	PA5
14	O	O	PC3	30	O	O	D0	46	O		A0	62	O	O	PA6
15	O	O	PC4	31	O	O	D1	47	O		A1	63	O	O	PA7
16	O	O	PC5	32	O	O	D2	48	O		A2	64	O	O	PB0



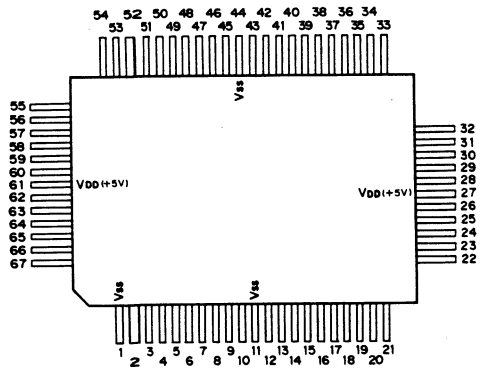


CS	RD	WR	A2	A1	A0	MODE
0	0	1	0	0	0	PORT A → DATA BUS
0	0	1	0	0	1	PORT B → DATA BUS
0	0	1	0	1	0	PORT C → DATA BUS
0	0	1	0	1	1	PORT D → DATA BUS
0	0	1	1	0	0	PORT X → DATA BUS
0	0	1	1	0	1	——
0	0	1	1	1	0	——
0	0	1	1	1	1	——
0	1	0	0	0	0	DATA BUS → PORT A
0	1	0	0	0	1	DATA BUS → PORT B
0	1	0	0	1	0	DATA BUS → PORT C
0	1	0	0	1	1	DATA BUS → PORT D
0	1	0	1	0	0	DATA BUS → PORT X
0	1	0	1	0	1	——
0	1	0	1	1	0	DATA BUS → CTL REG.1
0	1	0	1	1	1	DATA BUS → CTL REG.2
1	X	X	X	X	X	DATA BUS ; HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z, HIGH IMPEDANCE

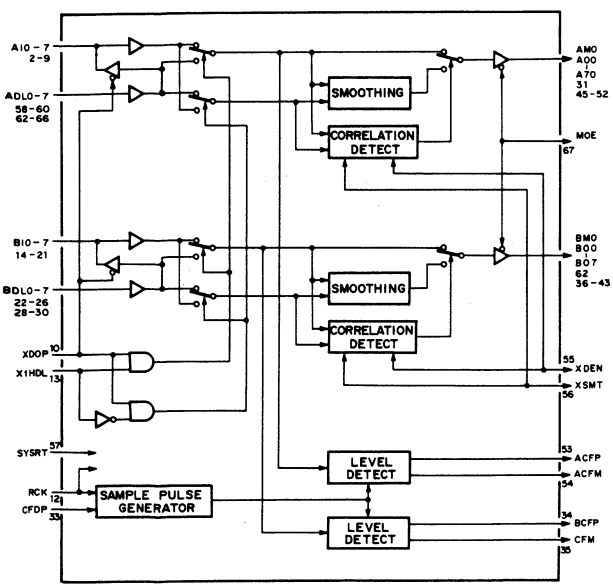
D0-D7 ; DATA BUS INPUTS/OUTPUTS
CS ; CHIP SELECT INPUT
RD ; READ STROBE INPUT
WR ; WRITE STROBE INPUT
A0-A2 ; ADDRESS INPUT
RST ; RESET INPUT
CLR ; CLEAR INPUT
PA0-PA7 ; PORT A INPUTS/OUTPUTS
PB0-PB7 ; PORT B INPUTS/OUTPUTS
PC0-PC7 ; PORT C INPUTS/OUTPUTS
PD0-PD7 ; PORT D INPUTS/OUTPUTS
PX0-PX3 ; PORT X INPUTS/OUTPUTS

CXD1131Q (SONY)
C-MOS GATE ARRAY
— TOP VIEW —

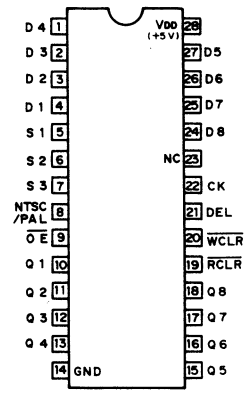


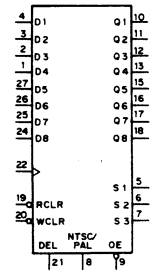
PIN NO	IN/OUT	SYMBOL	PIN NO	IN/OUT	SYMBOL	PIN NO	IN/OUT	SYMBOL	PIN NO	IN/OUT	SYMBOL
1	—	Vss	18	I	BI 3	35	O	BCFM	52	O	A70
2	I	AI 7	19	I	BI 2	36	O	BO 0	53	O	ACFP
3	I	AI 6	20	I	BI 1	37	O	BO 1	54	O	ACFM
4	I	AI 5	21	I	BI 0	38	O	BO 2	55	I	XDEN
5	I	AI 4	22	I	BDL0	39	O	BO 3	56	I	XSMT
6	I	AI 3	23	I	BDL1	40	O	BO 4	57	I	SYSRT
7	I	AI 2	24	I	BDL2	41	O	BO 5	58	I	ADL7
8	I	AI 1	25	I	BDL 3	42	O	BO 6	59	I	ADL6
9	I	AI 0	26	I	BDL 4	43	O	BO 7	60	I	ADL5
10	I	XDOP	27	—	VDD	44	—	Vss	61	—	VDD
11	—	Vss	28	I	BDL 5	45	O	A00	62	I	ADL4
12	I	RCK	29	I	BDL 6	46	O	A10	63	I	ADL3
13	I	X 1HDL	30	I	BDL 7	47	O	A20	64	I	ADL2
14	I	BI7	31	O	AMO	48	O	A30	65	I	ADL1
15	I	BI6	32	O	BMO	49	O	A40	66	I	ADLO
16	I	BI5	33	I	CFDP	50	O	A50	67	I	HOE
17	I	BI4	34	O	BCFP	51	O	A60			

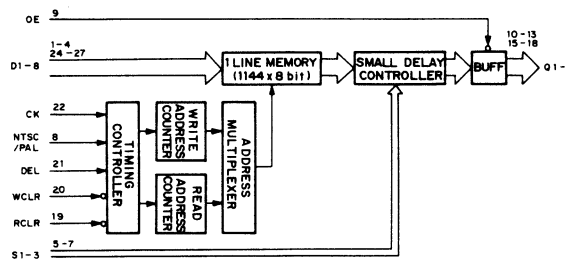
ACFM ;A-ch COLOR FRAME ID MINUS
ACFP ;A-ch COLOR FRAME ID PLUS
ADL0 7 ;A-ch 1H DELAYED INPUT DATA $2^0 \sim 2^7$
AI0 7 ;A-ch INPUT DATA $2^0 \sim 2^7$
AMO ;A-ch OUTPUT DTAT 2
A00 A70 ;A-ch OUTPUT DATA $2^0 \sim 2^7$
BCFM ;B-ch COLOR FRAME ID MINUS
BCFP ;B-ch COLOR FRAME ID PLUS
BDL0 7 ;B-ch 1H DELAYED INPUT DATA $2^0 \sim 2^7$
BI0 7 ;B-ch INPUT DATA $2^0 \sim 2^7$
BO0 7 ;B-ch OUTPUT DATA $2^0 \sim 2^7$
BMO ;B-ch OUTPUT DATA 2
CFDP ;COLOR FRAME ID DETECT PULSE
HOE ;H; OUTPUT ENABLE
RCK ;READ CK
SYSRT ;SYSTEM RESET
X DEN ;CORRELATION DETECT ENABLE
X DOP ;DROP OUT PULSE
X SMT ;SMOOTHING
X 1HDL ;1HDL SELECT



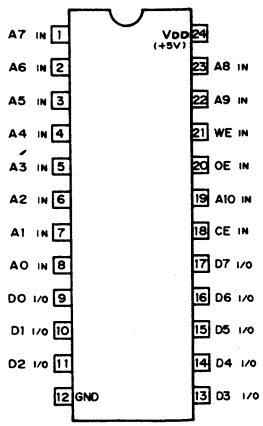
CXK1202S (SONY)
C-MOS DIGITAL DELAY LINE
— TOP VIEW —

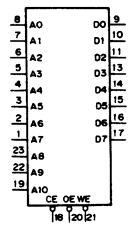






CXK5816M-12L (SONY) (ACCESS TIME 120nS)
C-MOS 16K (2Kx8-BIT) STATIC RAM
— TOP VIEW —



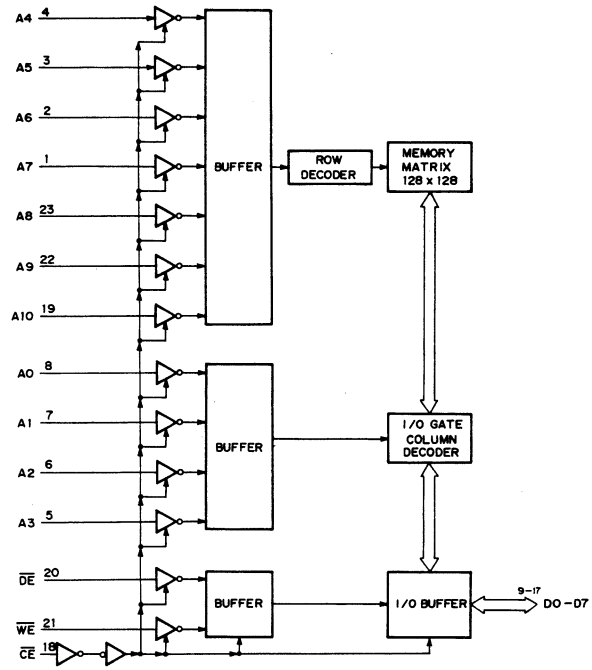


A0–A10; ADDRESS INPUTS
CE ; CHIP ENABLE INPUT
D0–D7 ; DATA INPUTS/OUTPUTS
OE ; OUTPUT ENABLE INPUT
WE ; WRITE ENABLE INPUT

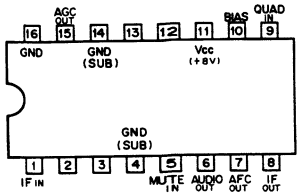
MODE SELECTION

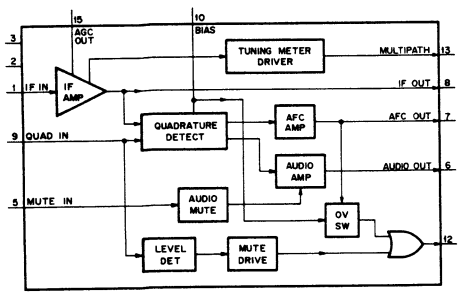
CONTROL INPUTS			MODE
CE	DE	WE	
1	X	X	NO CHANGE
0	1	1	DISABLE OUTPUT
0	0	1	READ
0	1	0	WRITE

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

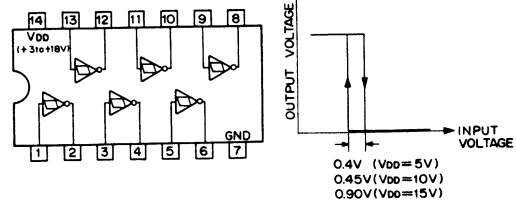


HA12411 (HITACHI)
FM IF AMPLIFIER
QUADRATURE DETECT
AUDIO AMPLIFIER
MUTING
AFC
AGC
TUNING METER DRIVER

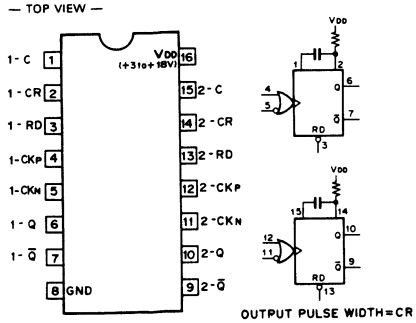


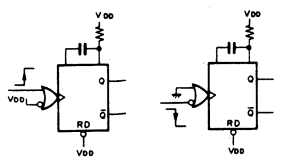


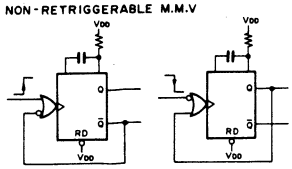
HD14584BFP (HITACHI) FLAT PACKAGE
C-MOS SCHMITT TRIGGER INVERTER
— TOP VIEW —



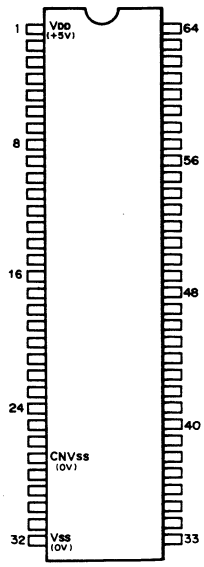
HD14538BFP (HITACHI) FLAT PACKAGE
MC14538BCP (MOTOROLA)
TC4538BF (TOSHIBA) FLAT PACKAGE
TC4538BP (TOSHIBA)
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE
MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

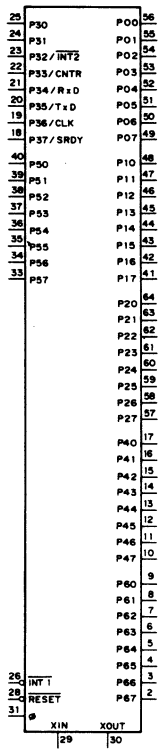




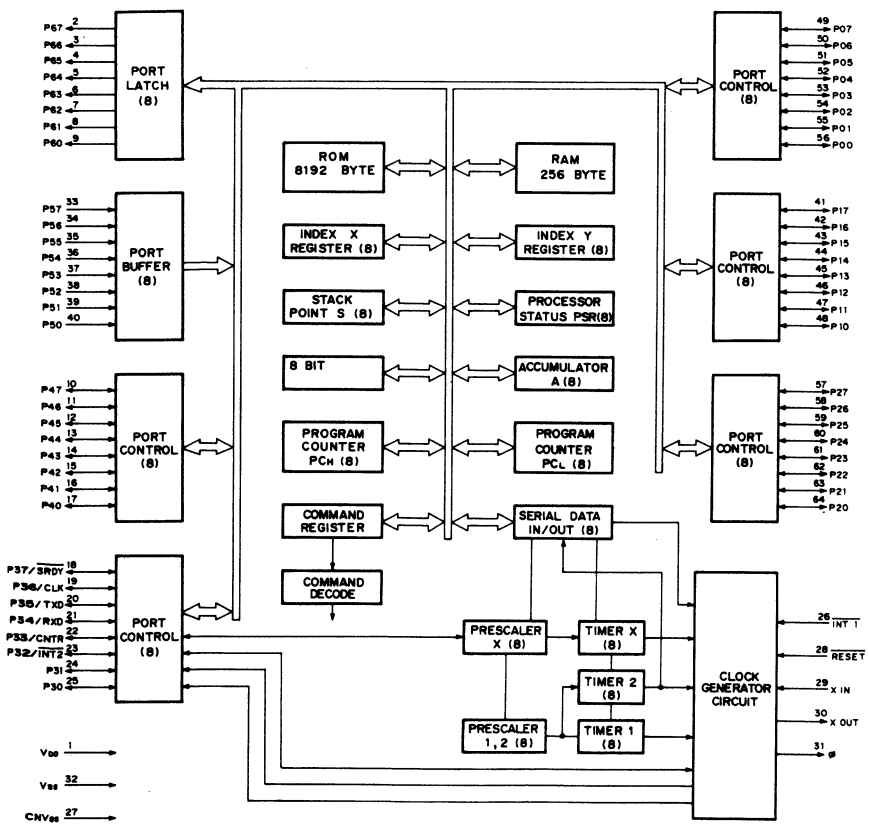


M50747-XXXSP
C-MOS PROCESS 8-BIT ONE CHIP MICROCOMPUTER
— TOP VIEW —

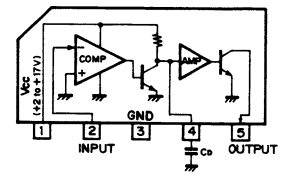




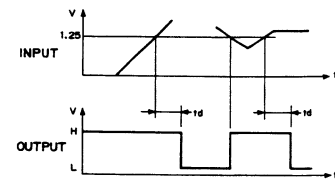
INT 1 ; INTERRUPT 1 IN
P00-P07 ;
P10-P17 ;
P20-P27 ; } 8 BIT I/O PORT
P30-P37 ;
P40-P47 ;
P50-P57; 8 BIT IN PORT
P60-P67; 8 BIT OUT PORT
RESET ; RESET IN
X IN/OUT ; CLOCK IN/OUT
ø ; CLOCK TIMING OUT
P32/INT2; PORT/INTERRUP2 IN/OUT
P33/CNTR; PORT/CONTROL IN/OUT
P34/RXD ; RECEIVED DATA
P35/TXD ; TRANCEMITTED DATA
P36/CLK ; PORT/CLOCK IN/OUT
P37/SRDY; SERIAL IN READY



M51958BL (MITSUBISHI)
VOLTAGE DETECT DELAY
— PRINTED SIDE VIEW —

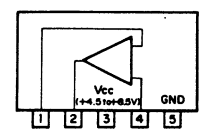


TIMING CHART

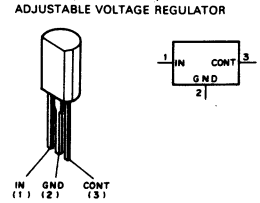


td ≒ 0.34 x Cd (PF) μsec

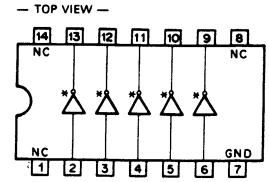
M5215L (MUTSUBISHI)
FM IF AMPLIFIER
— REAR VIEW —



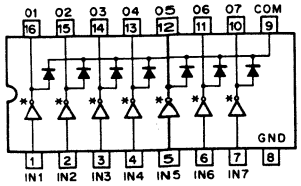
M5236L (MITSUBISHI)
ADJUSTABLE VOLTAGE REGULATOR



M54516P (MITSUBISHI)
INVERTER WITH OPEN-COLLECTOR
(DARLINGTON-CONNECTED TRANSISTOR ARRAY)
— TOP VIEW —

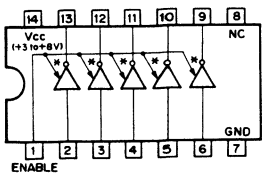


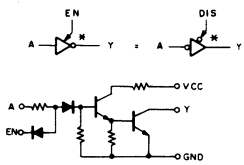
M54523P (MITSUBISHI)
BIPOLAR TRANSISTOR ARRAY WITH OPEN COLLECTOR
— TOP VIEW —



COM : COMMON

M54529AP (MITSUBISHI)
TRANSISTOR ARRAY
— TOP VIEW —

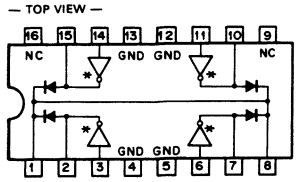


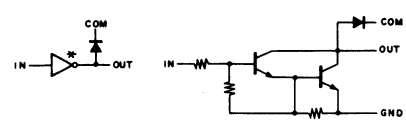


A	EN	Y
0	1	1
1	1	0
X	0	1

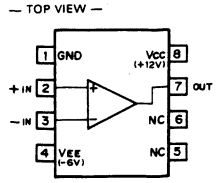
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
* ; OPEN COLLECTOR

M54532P (MITSUBISHI)
DARLINGTON TRANSISTOR ARRAY WITH CLAMP DIODE
— TOP VIEW —

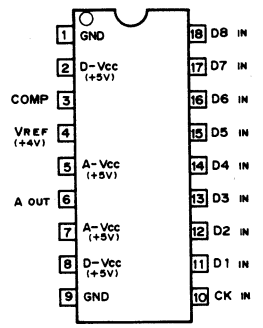


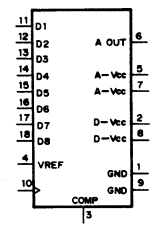


M84002PF (FUJITSU) FLAT PACKAGE
VOLTAGE COMPARATOR,
— TOP VIEW —

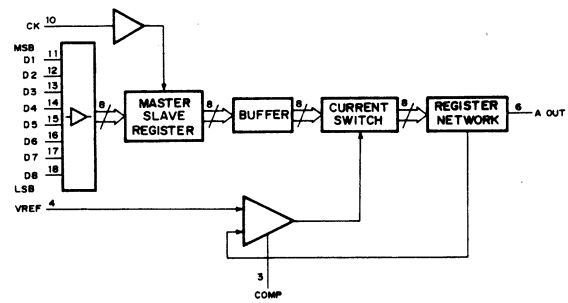


MB40778P (FUJITSU)
8-BIT VIDEO D/A CONVERTER
— TOP VIEW —

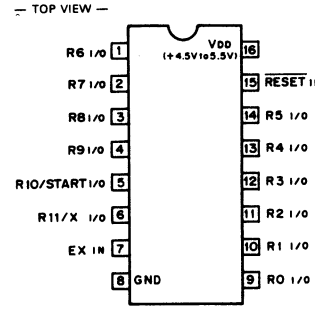


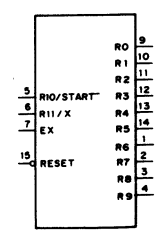


A OUT ; ANALOG OUTPUT
CK ; CLOCK INPUT
COMP ; COMPENSATION
D1–D8 ; DIGITAL INPUTS
VREF ; REFERENCE VOLTAGE INPUT

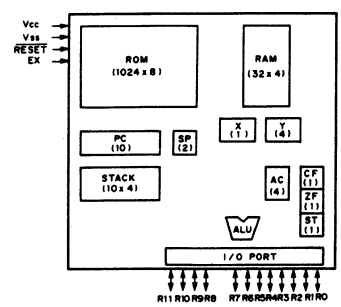


MB88201H-539N (FUJITSU)
C-MOS 4 BIT MICROCOMPUTER
— TOP VIEW —

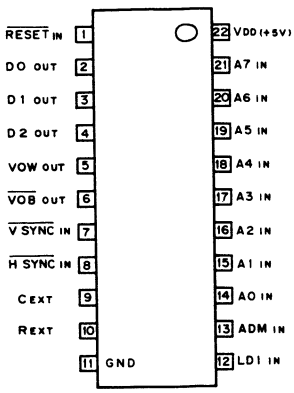


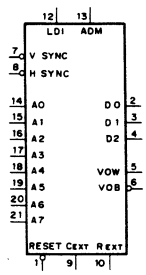


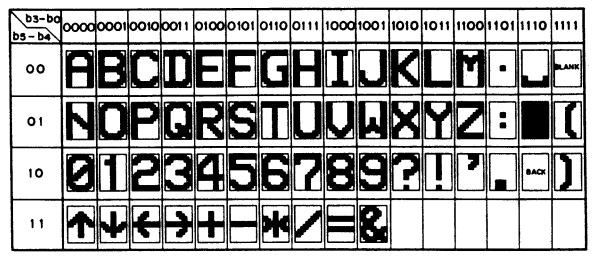
EX ; EXTERNAL X'TAL IN
R0–R11 ; I/O PORT(R) IN/OUT
RESET ; RESET IN
START ; STANDBY RELEASE IN
R11/X ; EXT CLOCK IN/INT CLOCK OUT



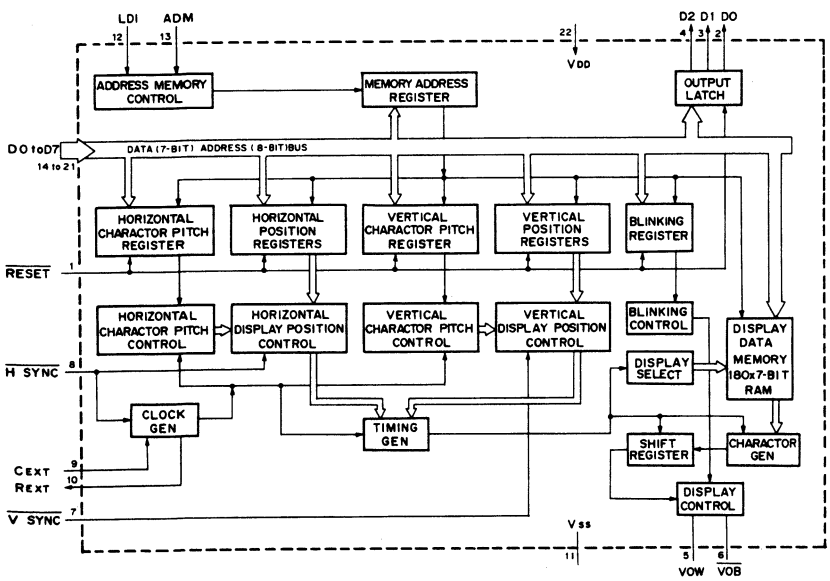
MB88303 (FUJITSU)
N-MOS PROGRAMMABLE TV DISPLAY CONTROLLER
— TOP VIEW —



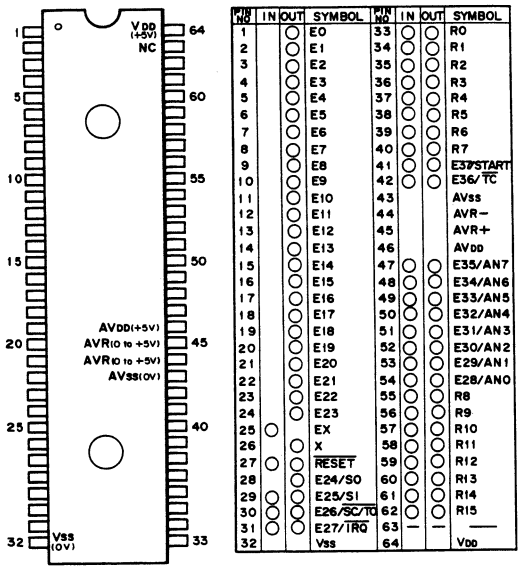




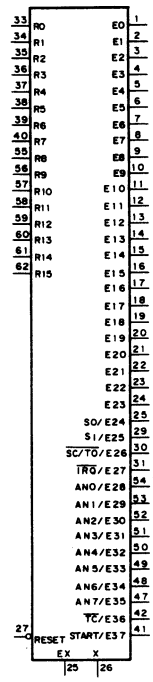
ADM	; ADDRESS INCREMENT MODE
AO to A7	; ADDRESS INPUT
DO to D2	; DATA OUTPUT
CEXT	; EXT CAPACITOR FOR OSC
LDI	; LOAD DATA AND INSTRUCTION
VOB	; VIDEO BLACK OUT
VOW	; VIDEO WHITE OUT
REXT	; EXT RESISTOR FOR OSC



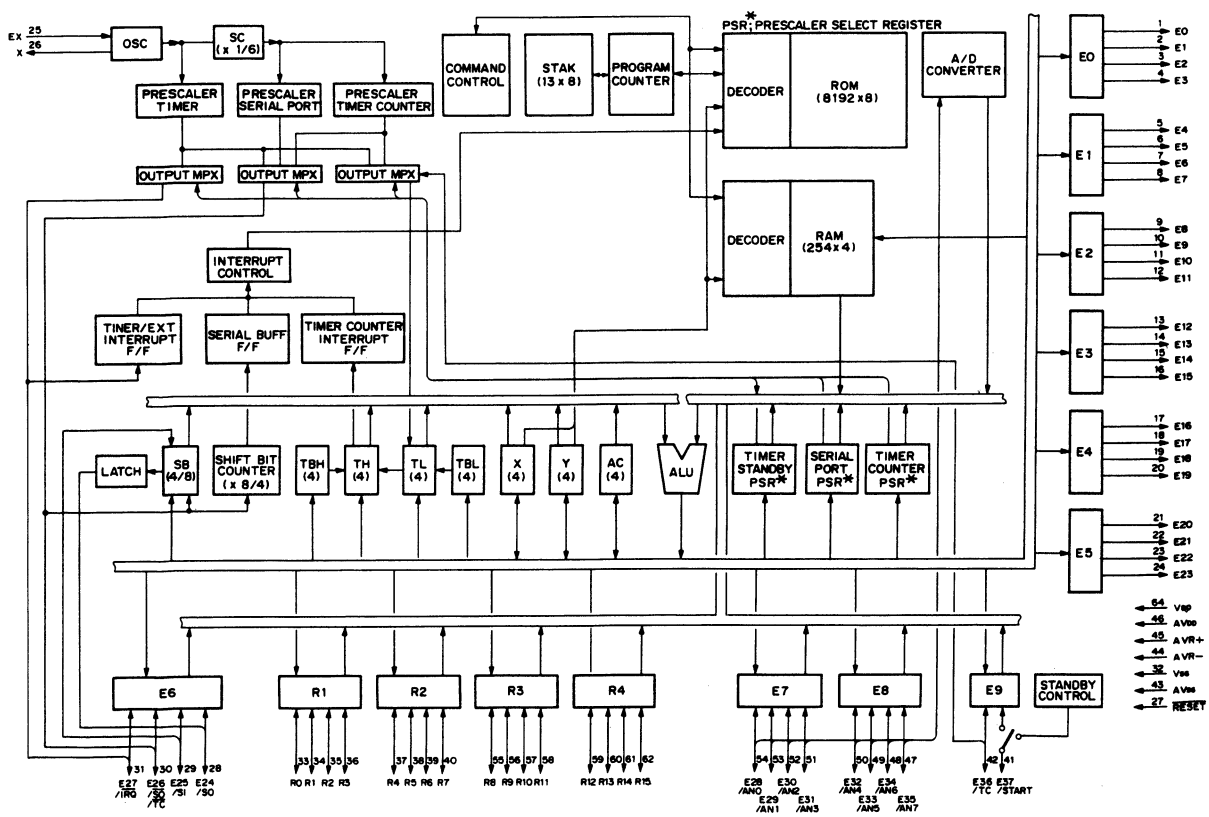
M88515B-280M (FUJITSU)
C-MOS 4 BIT ONE-CHIP MICROCOMPUTER WITH MULTI I/O AND 8 BIT A/D CONVERTER
— TOP VIEW —



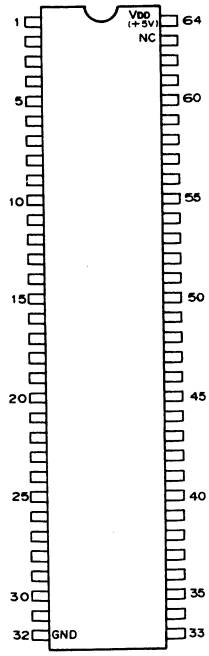
PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1		○	E0	33	○	○	R0
2		○	E1	34	○	○	R1
3		○	E2	35	○	○	R2
4		○	E3	36	○	○	R3
5		○	E4	37	○	○	R4
6		○	E5	38	○	○	R5
7		○	E6	39	○	○	R6
8		○	E7	40	○	○	R7
9		○	E8	41	○	○	E37/START
10		○	E9	42	○	○	E36/$\overline{TC}$
11		○	E10	43			AVss
12		○	E11	44			AVR−
13		○	E12	45			AVR+
14		○	E13	46			AVDD
15		○	E14	47	○	○	E35/AN7
16		○	E15	48	○	○	E34/AN6
17		○	E16	49	○	○	E33/AN5
18		○	E17	50	○	○	E32/AN4
19		○	E18	51	○	○	E31/AN3
20		○	E19	52	○	○	E30/AN2
21		○	E20	53	○	○	E29/AN1
22		○	E21	54	○	○	E28/AN0
23		○	E22	55	○	○	R8
24		○	E23	56	○	○	R9
25	○		EX	57	○	○	R10
26		○	X	58	○	○	R11
27	○		$\overline{RESET}$	59	○	○	R12
28		○	E24/SO	60	○	○	R13
29	○	○	E25/SI	61	○	○	R14
30	○	○	E26/SC/$\overline{TO}$	62	○	○	R15
31	○	○	E27/$\overline{IRQ}$	63	—	—	——
32			Vss	64			VDD



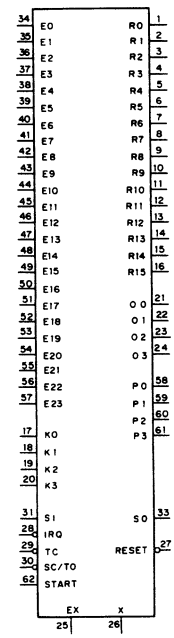
AN0-AN3; ANALOG INPUT PORT IN
AN4-AN7; ANALOG INPUT PORT IN OR
HIGH IMPEDANCE ANALOG INPUT PORT IN
E0-E24 ; I/O PORT (E PORT) OUT
E25-E37; I/O PORT (E PORT) IN/OUT
EX ; EXTERNAL CLOCKIN
IRQ ; EXTERNAL INTERRUPT REQUEST IN (↓)
R0-R15 ; I/O PORT (R PORT) IN/OUT
RESET ; RESET IN/OUT
SC/TO ; SHIFT CLOCK IN/TIMING OUT
SI ; SERIAL DATA IN
SO ; SERIAL DATA OUT
START ; START IN/OUT
TC ; EXTERNAL CLOCK IN FOR COUNTER (↓)
X ; CLOCK OUT



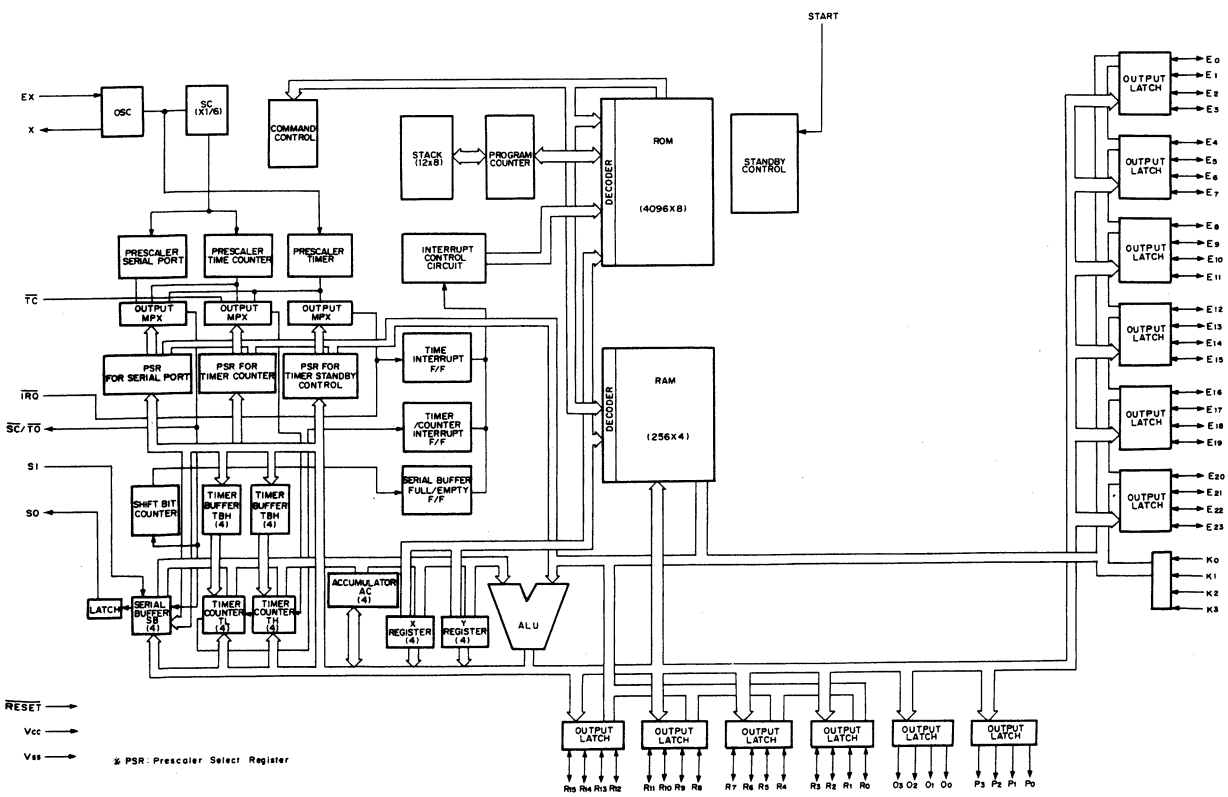
MB88525 (FUJITSU)
C-MOS 4-BIT ONE-CHIP MICROCOMPUTER
— TOP VIEW —



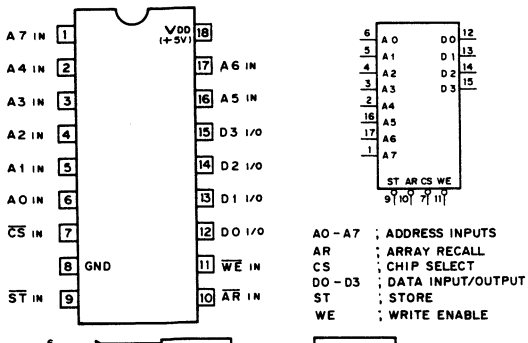
PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	O	O	R0	33		O	S0
2	O	O	R1	34	O	O	E0
3	O	O	R2	35	O	O	E1
4	O	O	R3	36	O	O	E2
5	O	O	R4	37	O	O	E3
6	O	O	R5	38	O	O	E4
7	O	O	R6	39	O	O	E5
8	O	O	R7	40	O	O	E6
9	O	O	R8	41	O	O	E7
10	O	O	R9	42	O	O	E8
11	O	O	R10	43	O	O	E9
12	O	O	R11	44	O	O	E10
13	O	O	R12	45	O	O	E11
14	O	O	R13	46	O	O	E12
15	O	O	R14	47	O	O	E13
16	O	O	R15	48	O	O	E14
17	O		K0	49	O	O	E15
18	O		K1	50	O	O	E16
19	O		K2	51	O	O	E17
20	O		K3	52	O	O	E18
21		O	O0	53	O	O	E19
22		O	O1	54	O	O	E20
23		O	O2	55	O	O	E21
24		O	O3	56	O	O	E22
25	O		EX	57	O	O	E23
26		O	X	58		O	P0
27	O	O	$\overline{RESET}$	59		O	P1
28	O		$\overline{IRQ}$	60		O	P2
29	O		$\overline{TC}$	61		O	P3
30	O	O	$\overline{SC}$/$\overline{TO}$	62	O		START
31	O		SI	63	—	—	
32			GND	64			VDD



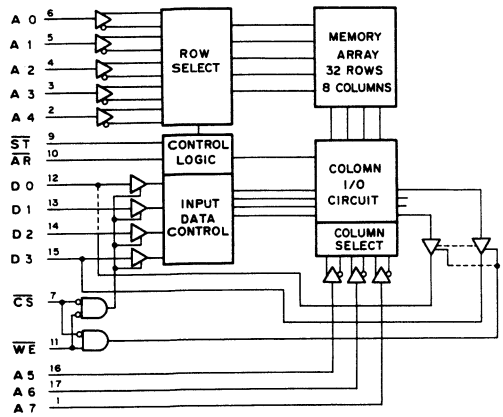
E0-E23	:	I/O PORT (E) IN/OUT
EX	:	EXTERNAL CLOCK IN
$\overline{IRQ}$	:	EXTERNAL INTERRUPT REQUEST IN
K0-K3	:	INPUT PORT (K) IN
O0-O3	:	OUTPUT PORT(O) OUT
P0-P3	:	OUTPUT PORT(P) OUT
R0-R15	:	I/O PORT (R) IN/OUT
$\overline{RESET}$	:	RESET IN
$\overline{SC}$/$\overline{TO}$	:	SHIFT CLOCK IN/TIMING OUT
SI	:	SERIAL DATA IN
START	:	STANDBY RELEASE IN
SO	:	SERAL DATA OUT
$\overline{TC}$	:	EXTERNAL CLOCK IN
X	:	CLOCK OUT



MBM2212-25P (FUJITSU) (ACCESS TIME = 250 nS)
N-MOS 1024 (256x4)-BIT NONVOLATILE STATIC RAM
— TOP VIEW —



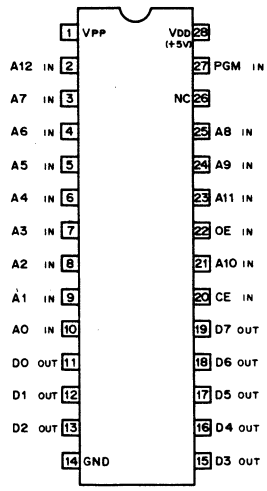
AO-A7 ; ADDRESS INPUTS
AR ; ARRAY RECALL
CS ; CHIP SELECT
DO-D3 ; DATA INPUT/OUTPUT
ST ; STORE
WE ; WRITE ENABLE

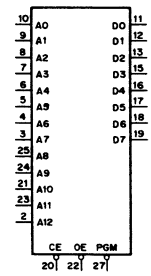


INPUTS				I/O	MODE
CS	WE	AR	ST		
1	X	1	1	HI-Z	NOT SELECTED
0	1	1	1	OUTPUT DATA	RAM READ
0	0	1	1	INPUT DATA 1	RAM WRITE "1"
0	0	1	1	INPUT DATA 0	RAM WRITE "0"
X	1	0	1	HI-Z	ARRAY RECALL
1	X	0	1	HI-Z	ARRAY RECALL
X	1	1	0	HI-Z	NONVOLATILE STORING
1	X	1	0	HI-Z	NONVOLATILE STORING

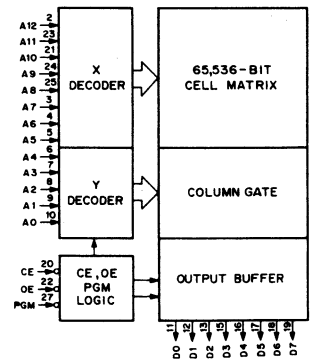
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

MBM2764-25 (FUJITSU) (ACCESS TIME = 250 nS)
N-MOS 64K (8K-8) ERASABLE PROM WITH 3-STATE OUTPUTS
— TOP VIEW —





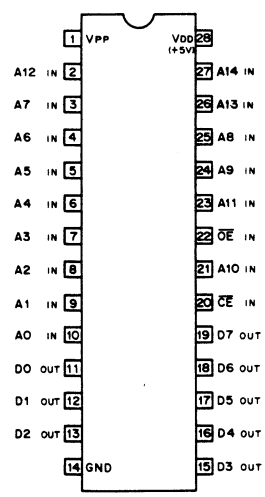
AO-A12 ; ADDRESS
CE ; CHIP ENABLE
DO-D7 ; DATA OUTPUT
OE ; OUTPUT ENABLE
PGM ; PROGRAM ENABLE
VPP ; PROGRAM VOLTAGE

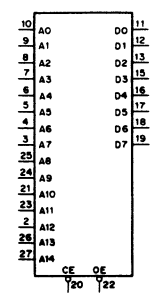


An	CE	OE	PGM	VPP	Dn	FUNCTION
An	0	0	1	+5V	DENTERED	READ
An	0	1	1	+5V	HI-Z	OUTPUT DISABLE
An	0	0	0	+5V	HI-Z	OUTPUT DISABLE
X	1	X	X	+5V	HI-Z	STANDBY
An	0	X	⊔	+21V	DIN	PGM
An	0	0	1	+21V	DENTERED	PGM VERIFY
X	1	X	X	+21V	HI-Z	PGM INH

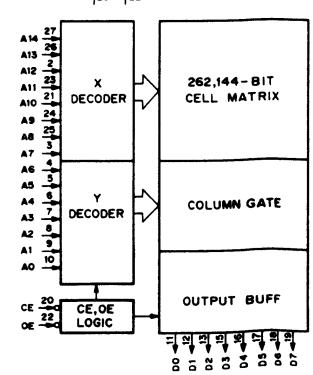
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

MBM27C256-25 (FUJITSU) (ACCESS TIME = 250 nS)
C-MOS 256K (32K-8) ERASABLE PROM WITH 3-STATE OUTPUTS
— TOP VIEW —





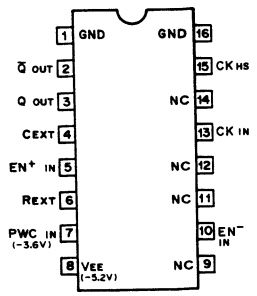
AO-A12 ; ADDRESS
CE ; CHIP ENABLE
DO-D7 ; DATA OUTPUT
OE ; OUTPUT ENABLE
VPP ; PROGRAM POWER SUPPLY



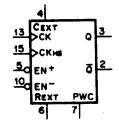
An	CE	OE	Vpp	Dn	FUNCTION
An	0	0	+5V	D OUT	READ
An	0	1	+5V	HI-Z	OUTPUT DISABLE
X	1	X	+5V	HI-Z	STANDBY
An	0	1	+21V	DIN	PGM
An	0	0	+21V	D OUT	PGM VERIFY
X	1	X	+21V	HI-Z	PGM INH

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE

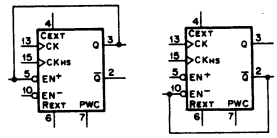
MC10198L (MOTOROLA)
ECL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —



RETRIGGERABLE MMV



NON-RETRIGGERABLE MMV



CK : CLOCK TRIGGER INPUT
CKHS : HIGH-SPEED CLOCK TRIGGER INPUT
EN+ : TRIGGER POSITIVE ENABLE
EN− : TRIGGER NEGATIVE ENABLE
PWC : EXTERNAL PULSE WIDTH CONTROL

FUNCTION TABLE

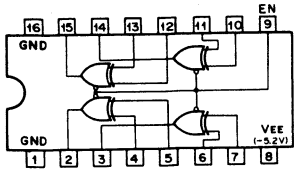
EN+	EN−	TRIG. SLOPE
0	0	⌐¬
0	1	⌐¬
1	0	⌐¬
1	1	DISABLE

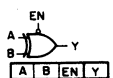
0 ; LOW LEVEL
1 ; HIGH LEVEL

OUTPUT PULSE WIDTH : PWQ
PWQ = 1.19 · CEXT (REXT +284)
WHERE
PWQ = SEC
CEXT = FARADS
REXT = OHMS
VEE = −5.2V
PWC = −3.6V

NOTE ; · SELECT REXT RANGING FROM ZERO TO 16K OHMS.
SELECT CEXT GREATER THAN 20PF.

MC10H113M (MOTOROLA) FLAT PACKAGE
ECL EXCLUSIVE OR GATE
— TOP VIEW —

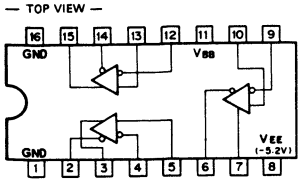




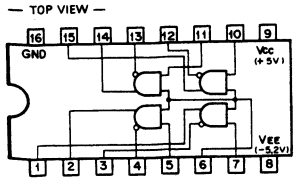
A	B	EN	Y
0	0	0	0
0	1	0	1
1	0	0	1
1	1	0	0
X	X	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

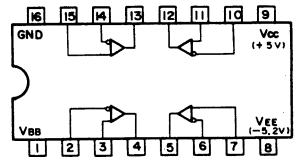
MC10H116M (MOTOROLA) FLAT PACKAGE
ECL DIFFERENTIAL OR/NOR LINE RECEIVER
— TOP VIEW —



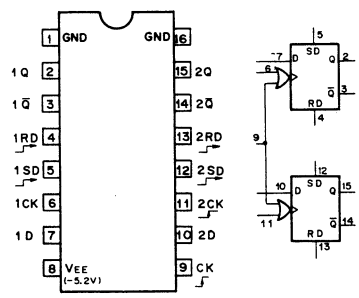
MC10H124M (MOTOROLA) FLAT PACKAGE
ECL TTL-TO-ECL TRANSLATOR
— TOP VIEW —



MC10H125M (MOTOROLA) FLAT PACKAGE
ECL ECL-TO-TTL TRANSLATOR
— TOP VIEW —



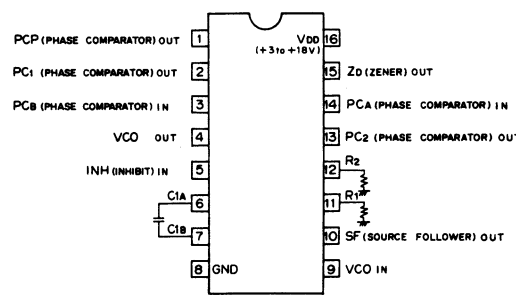
MC10H131M (MOTOROLA) FLAT PACKAGE
ECL D-TYPE FLIP FLOP
— TOP VIEW —

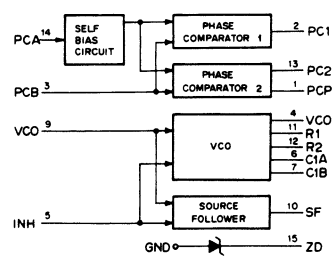


INPUTS				OUTPUTS	
SD	RD	CK	D	Qn+1	Q̄n+1
1	0	X	X	1	0
0	1	X	X	0	1
1	1	X	X	ND	ND
0	0	⌐¬	1	1	0
0	0	⌐¬	0	0	1
0	0	0	X	Qn	Q̄n

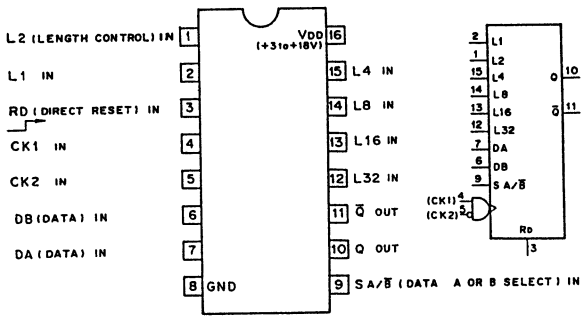
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
ND ; NOT DEFINED

MC14046BCP (MOTOROLA)
C-MOS PHASE LOCKED LOOP
— TOP VIEW —





MC14557BF (MOTOROLA) FLAT PACKAGE
C-MOS 1-TO-64-BIT VARIABLE LENGTH SHIFT REGISTER
— TOP VIEW —



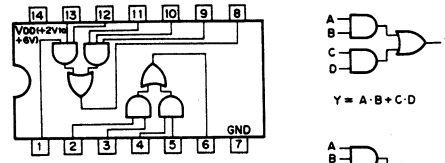
LENGTH SELECT TRUTH TABLE

L32	L16	L8	L4	L2	L1	REGISTER LENGTH
0	0	0	0	0	0	1-BIT
0	0	0	0	0	1	2-BIT
0	0	0	0	1	0	3-BIT
0	0	0	0	1	1	4-BIT
0	0	0	1	0	0	5-BIT
⋮	⋮	⋮	⋮	⋮	⋮	⋮
1	1	1	1	0	0	61-BIT
1	1	1	1	0	1	62-BIT
1	1	1	1	1	0	63-BIT
1	1	1	1	1	1	64-BIT

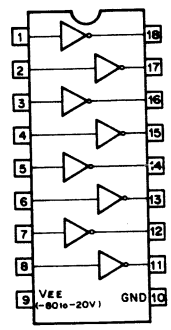
INPUTS				OUTPUT
RD	S A/B	CK1	CK2	Q
0	0	⌐	0	DB
0	1	⌐	0	DA
0	0	1	⌐	DB
0	1	1	⌐	DA
1	X	X	X	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

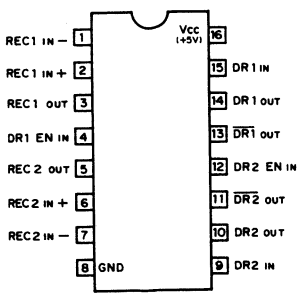
MC74HC58N (MOTOROLA)
CMOS 2-WIDE 2-INPUT/3-INPUT AND-OR GATE
— TOP VIEW —



MSL917RS (OKI)
VACUUM FLUORESCENT DISPLAY DRIVER
— TOP VIEW —



MC34051P (MOTOROLA)
RS-422 DRIVER/RECEIVER
— TOP VIEW —

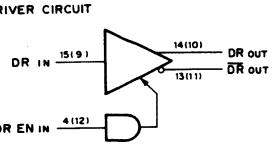


DR EN	MODE
0	DISABLE
1	ENABLE

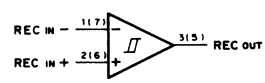
0 ; LOW LEVEL
1 ; HIGH LEVEL

DR ; DRIVER
DR EN ; DRIVER ENABLE
REC ; RECEIVER

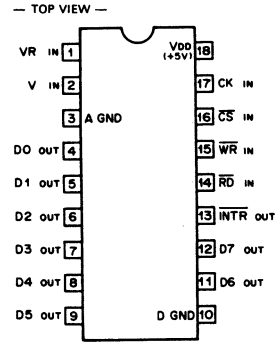
DRIVER CIRCUIT

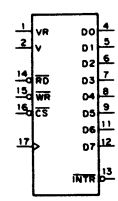


RECEIVER CIRCUIT

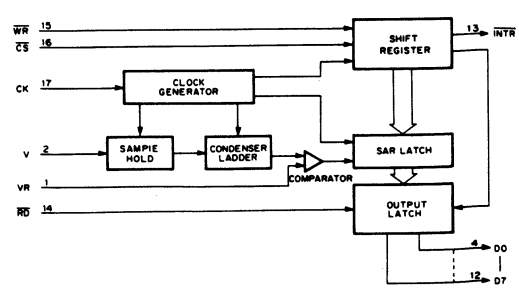


MSM5204ARS (OKI)
C-MOS 8 BIT ANALOG TO DIGITAL CONVERTER
— TOP VIEW —

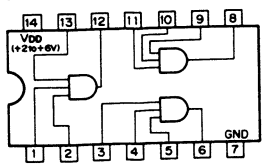


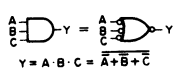


A GND ; ANALOG GND
CK ; CLOCK INPUT
CS ; CHIP SELECT INPUT
DO–D7 ; DATA OUTPUTS
D GND ; DIGITAL GND
INTR ; INTERRVPT OUTPUT
RD ; READ INPUT
V ; ANALOG VOLTAGE INPUT
VR ; VOLTAGE REFERENCE INPUT
WR ; WRITE INPUT



MC74HC11F (MOTOROLA) FLAT PACKAGE
TC74HC11P (TOSHIBA)
C-MOS 3-INPUT POSITIVE-AND GATE

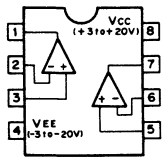




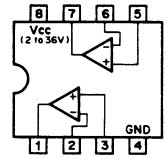
A	B	C	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

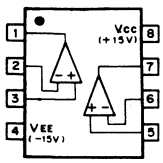
NE5532P (TI)
LOW NOISE OPERATIONAL AMPLIFIER
— TOP VIEW —



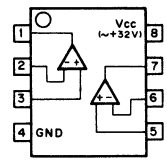
NJM2903D (JRC)
NJM2903M (JRC) FLAT PACKAGE
uPC393G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —



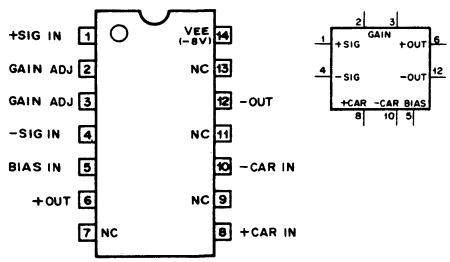
NJM082M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —



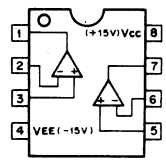
NJM4556D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



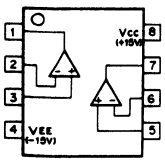
NJM1496M (JRC) FLAT PACKAGE
BALANCED MODULATOR/DEMODULATOR
— TOP VIEW —



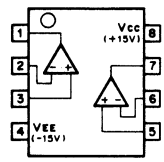
NJM4558D (JRC)
NJM4558D-FA (JRC)
NJM4558M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



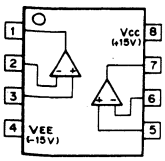
NJM2041M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



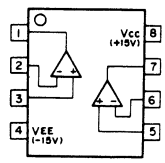
NJM4560DD (JRC)
NJM4560M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



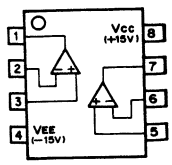
NJM2043DD (JRC)
NJM2043M-D (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



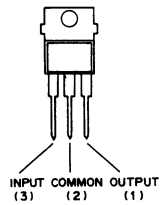
NJM4562D-D (JRC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



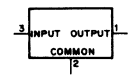
NJM5532M (JRC) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



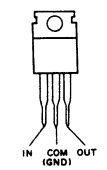
NJM78M ? ?A (JRC)
POSITIVE VOLTAGE REGULATOR (500mA)
— FRONT VIEW —

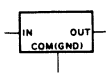


5V NJM78M05A
6V NJM78M06A
8V NJM78M08A
9V NJM78M09A
12V NJM78M12A
15V NJM78M15A
18V NJM78M18A
20V NJM78M20A
24V NJM78M24A



NJM78 ? ?A (JRC)
POSITIVE VOLTAGE REGULATOR (1A)
— SIDE VIEW —

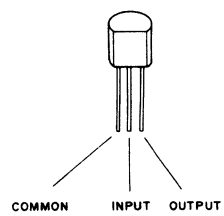


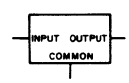


OUTPUT VOLTAGE	AN78??	FS78??	HA178??P	L78??	NJM78??B	NJM78??A/K
+5V	AN7805	FS7805	HA17805P	L7805	--------	NJM7805A/K
+6V	AN7806	------	HA17806P	-----	--------	NJM7806A/K
+7V	AN7807	------	HA17807P	L7807	--------	----------
+8V	AN7808	------	HA17808P	-----	--------	NJM7808A/K
+8.5V	------	------	--------	-----	--------	----------
+9V	AN7809	------	--------	-----	--------	NJM7809A/K
+10V	AN7810	------	--------	-----	--------	----------
+12V	AN7812	FS7812	HA17812P	-----	NJM7812B	NJM7812A/K
+15V	AN7815	FS7815	HA17815P	-----	--------	NJM7815A/K
+18V	AN7818	------	HA17818P	-----	--------	NJM7818A/K
+20V	AN7820	------	--------	-----	--------	NJM7820A/K
+24V	AN7824	FS7824	HA17824P	-----	--------	NJM7824A/K

OUTPUT VOLTAGE	uA78??UC	uPC143??H	uPC78??H	TA78???P/AP
+5V	uA7805UC	uPC14305H	uPC7805H	TA78005P/AP
+6V	uA7806UC	---------	--------	TA78006P/AP
+7V	--------	---------	--------	--------
+8V	uA7808UC	uPC14308H	uPC7808H	TA78008P/AP
+8.5V	uA7885UC	---------	--------	---------
+9V	--------	---------	--------	TA78009P/AP
+10V	--------	---------	--------	TA78010P/AP
+12V	uA7812UC	uPC14312H	uPC7812H	TA78012P/AP
+15V	uA7815UC	uPC14315H	uPC7815H	TA78015P/AP
+18V	uA7818UC	uPC14318H	uPC7818H	TA78018P/AP
+20V	--------	---------	--------	TA78020P/AP
+24V	uA7824UC	uPC14324H	uPC7824H	TA78024P/AP

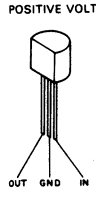
NJM79L ? ?A (JRC)
NEGATIVE VOLTAGE REGULATOR (100mA)
— FRONT VIEW —

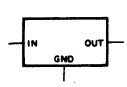




OUTPUT VOLTAGE	NJM79L??A
−3V	NJM79L03A
−4V	
−5V	NJM79L05A
−6V	NJM79L06A
−7V	
−8V	NJM79L08A
−9V	NJM79L09A
−10V	
−12V	NJM79L12A
−15V	NJM79L15A
−18V	NJM79L18A
−20V	
−24V	NJM79L24A

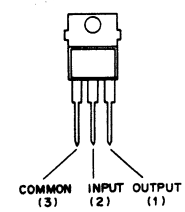
NJM78L ? ?A (NEC)
POSITIVE VOLTAGE REGULATOR (100mA)



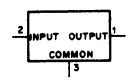


OUTPUT VOLTAGE	NJM78L??A	uA78L??ACL	uA78L??AWV	uPC78L??J	AN78L??
+2.6V	NJM78L02A	uA78L02ACL	uA78L26AWV	---------	-------
+4V	---------	----------	----------	---------	AN78L04
+5V	NJM78L05A	uA78L05ACL	uA78L05AWV	uPC78L05J	AN78L05
+6V	NJM78L06A	----------	----------	---------	AN78L06
+6.2V	---------	uA78L06ACL	uA78L62AWV	---------	-------
+7V	---------	----------	----------	---------	AN78L07
+8V	NJM78L08A	uA78L08ACL	----------	uPC78L08J	AN78L08
+8.2V	---------	----------	uA78L82AWV	---------	-------
+9V	NJM78L09A	uA78L09ACL	uA78L09AWV	---------	AN78L09
+10V	---------	uA78L10ACL	----------	uPC78L10J	AN78L10
+12V	NJM78L12A	uA78L12ACL	uA78L12AWV	uPC78L12J	AN78L12
+15V	NJM78L15A	uA78L15ACL	uA78L15AWV	uPC78L15J	AN78L15
+18V	NJM78L18A	----------	uA78L18AWV	---------	AN78L18
+20V	NJM78L20A	----------	----------	---------	AN78L20
+24V	NJM78L24A	----------	uA78L24AWV	---------	AN78L24

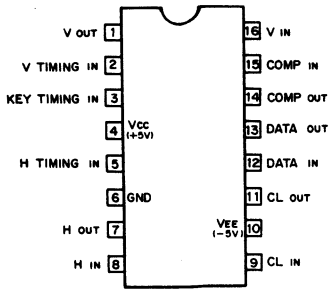
NJM79M ? ?A (JRC)
NEGATIVE VOLTAGE REGULATOR (500mA)
— FRONT VIEW —

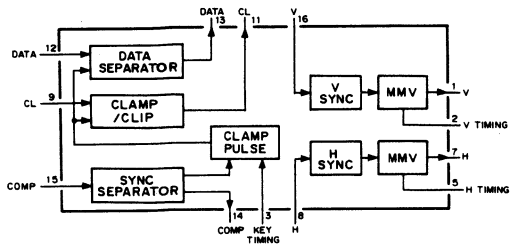


−5V NJM79M05A
−6V NJM79M06A
−8V NJM79M08A
−9V NJM79M09A
−12V NJM79M12A
−15V NJM79M15A
−18V NJM79M18A
−24V NJM79M24A

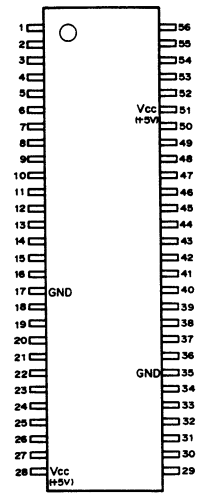


PA0009 (PIONEER)
SIGNAL SEPARATOR
— TOP VIEW —



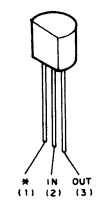


SBX4001-01 (FUJITSU)
32 LINE MEMORY
— TOP VIEW —

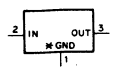


PIN NO.	IN/OUT	PIN NAME	PIN NO.	IN/OUT	PIN NAME
1	O	BD20	29	I	WD23
2	O	BD21	30	I	WD22
3	O	BD22	31	I	WD21
4	O	BD23	32	I	WD20
5	O	RD23	33	O	DORY1
6	O	RD22	34	—	NC
7	O	RD21	35	—	GND
8	O	RD20	36	I	MOD1
9	I	CKW	37	I	MOD2
10	I	NCKW	38	I	MA212
11	I	DO	39	I	MA211
12	I	RSUB	40	I	MA210
13	I	CKR	41	I	MA29
14	I	NCKR	42	I	MA28
15	I	CLR	43	I	MA27
16	I	RMA1	44	I	MA26
17	O	GND	45	I	MA25
18	O	RD24	46	I	MA24
19	O	RD25	47	I	MA23
20	O	RD26	48	I	MA22
21	O	RD27	49	I	MA21
22	O	BD27	50	I	MA20
23	O	BD26	51	—	Vcc
24	O	BD25	52	I	WE
25	O	BD24	53	I	WD24
26	O	DOB1	54	I	WD25
27	O	DOBY1	55	I	WD26
28	—	Vcc	56	I	WD27

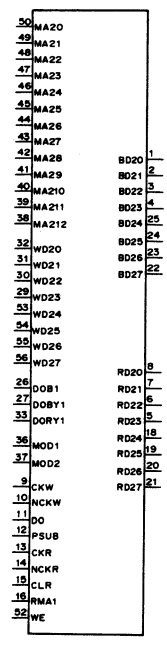
S-802?? (SEIKO I AND E)
C-MOS VOLTAGE REGULATOR



OUTPUT VOLTAGE	S-802PP S-812PP
-3V	S-80230AG
-5V	S-80250AG
+3V	S-81230AG
+5V	S-81250AG
+5V	S-81250HG

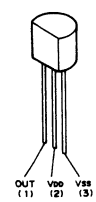


* S-802PP → VDD
S-812PP → Vss

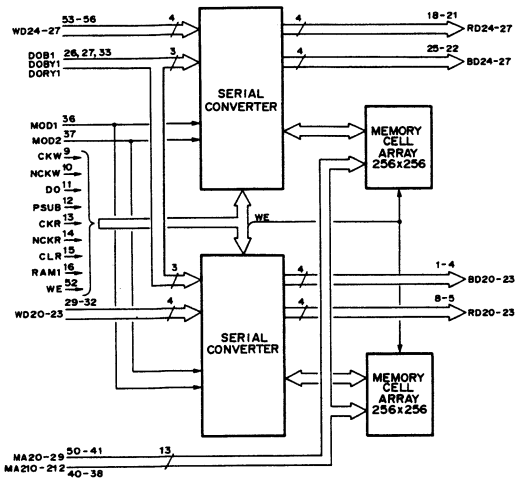



```
BD20-27  ; SERIAL DATA/MAIN/B-Y OUTPUTS
CKR      ; MAIN SIGNAL P/S CONV. CLOCK INPUT
CKW      ; S/P CONV. CLOCK INPUT
CLR      ; START LINE ID SIGNAL INPUT
DO       ; INPUT DATA REPLACEMENT CONTROL INPUT
DOB1     ; BECOME LOW LEVEL WHEN DORY OR DOBY IS LOW
DOBY1    ; BECOME LOW LEVEL WHEN B-Y OR MAIN ARE ALL LOW
DORY1    ; BECOME LOW LEVEL WHEN R-Y OR MAIN ARE ALL LOW
MA20-29, ;
  210-212; ADDRESS INPUTS
MOD1, 2  ; MODE CONTROL INPUTS
NCKR     ; PHASE CONTROL CLOCK (FOR RD20-27) INPUT
NCKW     ; DIVIDING CLOCK INPUT
PSUB     ; REED SUB ADDRESS
RD20-27  ; SERIAL DATA/MAIN/R-Y OUTPUTS
RMA1     ; REED MAIN ADDRESS
WD20-27  ; SERIAL DATA INPUTS
WE       ; READ/WRITE CONTROL INPUT
```

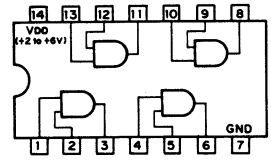
S-805 ? ? (SEIKO I AND E)
VOLTAGE DETECTOR

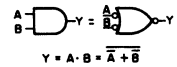


DETECTION RANGE (V)	S-805??
1.00 – 1.10	S-8051 ANB
1.10 – 1.20	S-8051 ANR
2.00 – 2.20	S-8052 ALB
2.20 – 2.40	S-8052 ALR
2.40 – 2.60	S-8052 ALO
2.60 – 2.80	S-8052 ALY
2.80 – 3.10	S-8053 ALB
2.90 – 3.10	S-8053 HLB
3.10 – 3.40	S-8053 ALR
3.25 – 3.405	S-8053 ALR-U
3.80 – 4.20	S-8054 HN
4.00 – 4.30	S-8054 ALB
4.30 – 4.60	S-8054 ALR
4.60 – 4.90	S-8054 ALO
4.90 – 5.20	S-8054 ALY



SN74HC08NS (TI) FLAT PACKAGE
TC74HC08F (TOSHIBA) FLAT PACKAGE
TC74HC08P (TOSHIBA)
C-MOS 2-INPUT AND GATE
— TOP VIEW —

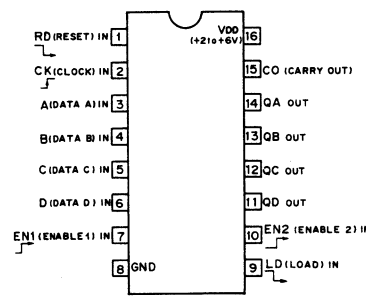


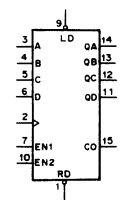


A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0; LOW LEVEL
1; HIGH LEVEL

SN74HC161NS (TI) FLAT PACKAGE
C-MOS SYNCHRONOUS PRESETTABLE 4-BIT BINARY COUNTER
— TOP VIEW —



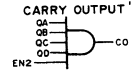


MODE SELECTION

CONTROL INPUT				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

CARRY OUTPUT "CO"

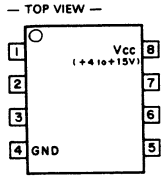


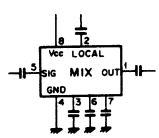
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

COUNT SEQUENCE

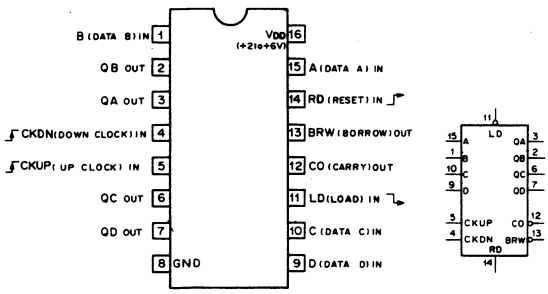
COUNT	OUTPUT			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

SN16913P (TI)
BALANCED MIXER
— TOP VIEW —

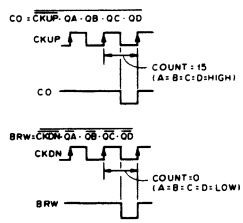




SN74HC193NS (TI) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT UP/DOWN COUNTER
— TOP VIEW —



CONTROL INPUT				MODE
RD	LD	CKUP	CKDN	
1	X	X	X	RESET TO ZERO
0	0	X	X	PRESET
0	1	↑	1	UP COUNT
0	1	1	↑	DOWN COUNT
0	1	1	1	NO COUNT

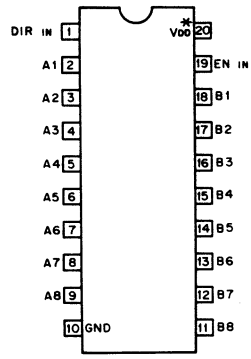


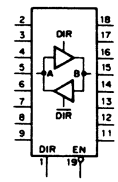
COUNT	OUTPUT			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

UP COUNT
DOWN COUNT

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74HC245NS (TI) FLAT PACKAGE
TC74HC245P (TOSHIBA)
C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUT
— TOP VIEW —

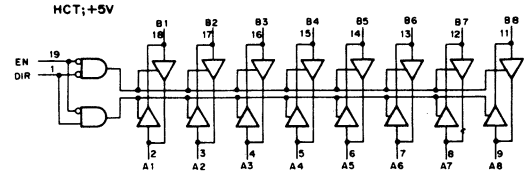




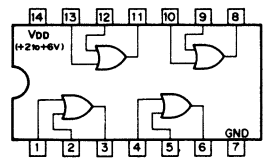
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

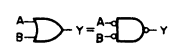
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

* VDD HC ; +2 to +6V
HCT ; +5V



SN74HC32NS (TI) FLAT PACKAGE
TC74HC32F (TOSHIBA) FLAT PACKAGE
TC74HC32P (TOSHIBA)
C-MOS 2-INPUT OR GATE
— TOP VIEW —

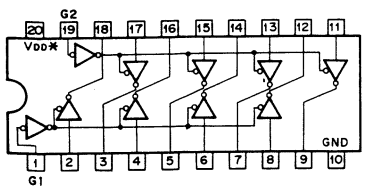


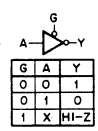


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

SN74HC240NS (TI) FLAT PACKAGE
C-MOS 3-STATE INVERTER/LINE DRIVER
— TOP VIEW —

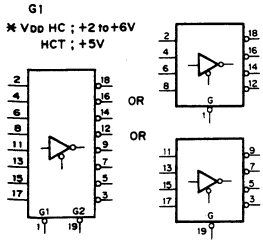




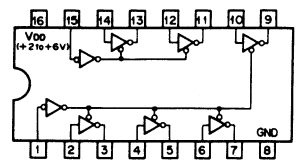
G	A	Y
0	0	1
0	1	0
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

* VDD HC ; +2 to +6V
HCT ; +5V

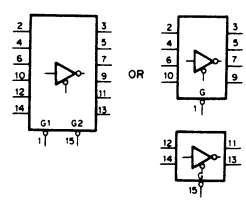


SN74HC368NS (TI) FLAT PACKAGE
C-MOS BUS INVERTER WITH 3-STATE OUTPUTS
— TOP VIEW —

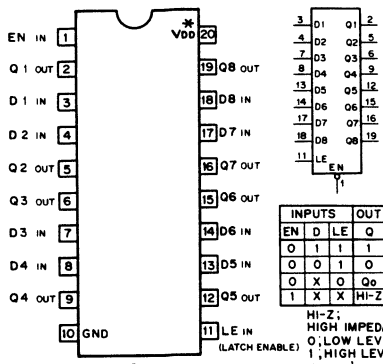


G	A	Y
0	0	1
0	1	0
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE



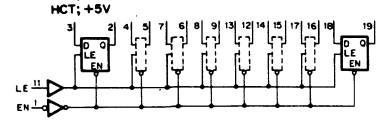
SN74HC373 (TI)
SN74HC373NS (TI) FLAT PACKAGE
C-MOS 3-STATE OUTPUTS OCTAL LATCHES
— TOP VIEW —



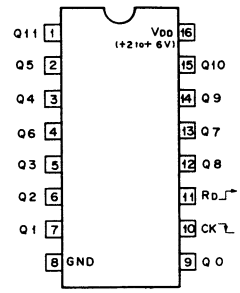
INPUTS			OUT
EN	D	LE	Q
0	1	1	1
0	0	1	0
0	X	0	Q0
1	X	X	HI-Z

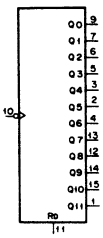
HI-Z; HIGH IMPEDANCE
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

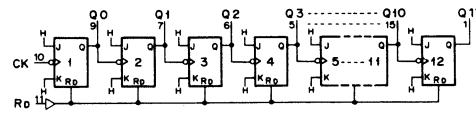
* VDD HC; +2 to +6V
HCT; +5V



SN74HC4040NS (TI) FLAT PACKAGE
C-MOS 12-STAGE RIPPLE CARRY BINARY COUNTER/DRIVER
— TOP VIEW —





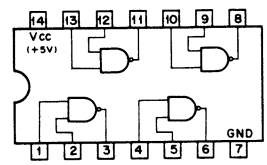


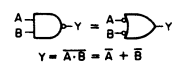
COUNT	Q11	Q10	Q9	Q8	Q7	Q6	Q5	Q4	Q3	Q2	Q1	Q0
0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	1	0
3	0	0	0	0	0	0	0	0	0	0	1	1
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
4095	1	1	1	1	1	1	1	1	1	1	1	1

RD	Q11 ····· Q0
1	ALL LOW
0	COUNT

0; LOW LEVEL
1; HIGH LEVEL

SN74LS00NS (TI) FLAT PACKAGE
TTL 2-INPUT POSITIVE-NAND GATE
— TOP VIEW —



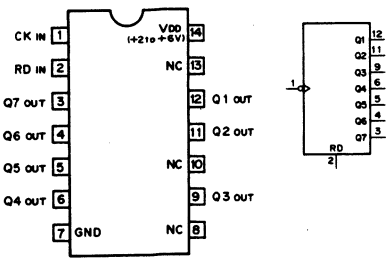


$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

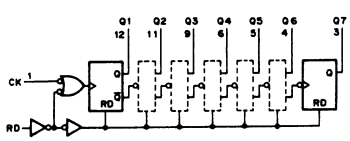
0; LOW LEVEL
1; HIGH LEVEL

SN74HC4024NS (TI) FLAT PACKAGE
C-MOS 7-BIT BINARY COUNTERS

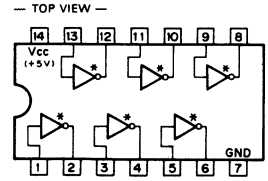


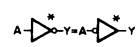
COUNT	INPUTS		OUTPUTS						
	CK	RD	Q7	Q6	Q5	Q4	Q3	Q2	Q1
0	X	1	0	0	0	0	0	0	0
1	↓	0	0	0	0	0	0	0	1
2	↓	0	0	0	0	0	0	1	0
3	↓	0	0	0	0	0	0	1	1
⋮									
125	↓	0	1	1	1	1	1	0	1
126	↓	0	1	1	1	1	1	1	0
127	↓	0	1	1	1	1	1	1	1
–	0	0	NO CHANGE						
–	1	0							

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE



SN74LS06N (TI)
SN74LS06NS (TI) FLAT PACKAGE
TTL INVERTER BUFFER/DRIVER WITH OPEN-COLLECTOR
— TOP VIEW —



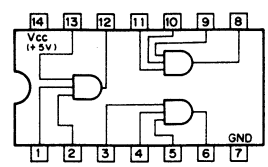


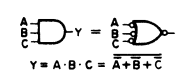
$Y = \overline{A}$

A	Y
0	1
1	0

0; LOW LEVEL
1; HIGH LEVEL
*; OPEN COLLECTOR

SN74LS11NS (TI) FLAT PACKAGE
TTL 3-INPUT POSITIVE-AND GATE
— TOP VIEW —



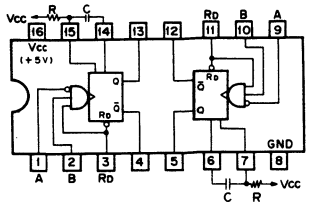


$Y = A \cdot B \cdot C = \overline{\overline{A} + \overline{B} + \overline{C}}$

A	B	C	Y
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

0; LOW LEVEL
1; HIGH LEVEL

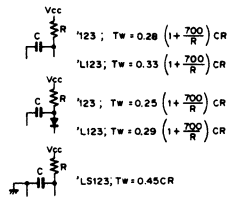
SN74LS123N (TI)
SN74LS123NS (TI) FLAT PACKAGE
TTL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR WITH DIRECT RESET
— TOP VIEW —



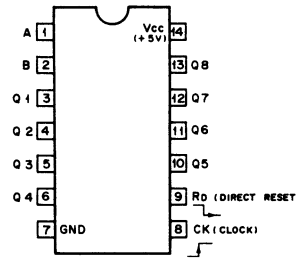
INPUTS			OUTPUTS	
Rd	A	B	Q	$\bar{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↓	⊓	⊔
1	↓	1	⊓	⊔
↓	0	1	⊓	⊔

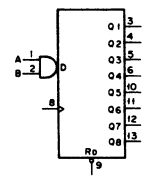
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

OUTPUT PULSE WIDTH



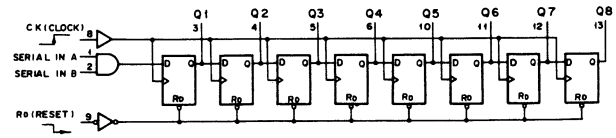
SN74LS164NS (TI) FLAT PACKAGE
TTL 8-BIT PARALLEL-OUT SERIAL SHIFT REGISTER
— TOP VIEW —



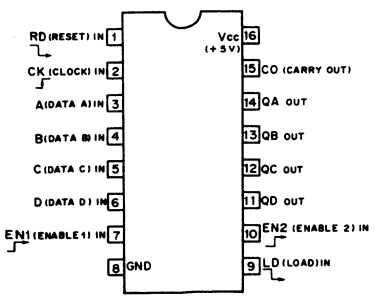


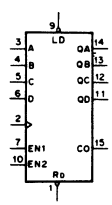
INPUTS				OUTPUTS			
Rd	CK	A	B	Q1	Q2	----	Q8
0	X	X	X	0	0	0	0
1	0	X	X	Q1o	Q2o	----	Q8o
1	⊓	1	1	1	Q1n	----	Q7n
1	⊓	0	X	0	Q1n	----	Q7n
1	⊓	X	0	0	Q1n	----	Q7n

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE



SN74LS163ANS (TI) FLAT PACKAGE
TTL PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —





MODE SELECTION

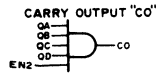
CONTROL INPUTS				MODE
Rd	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

COUNT SEQUENCE

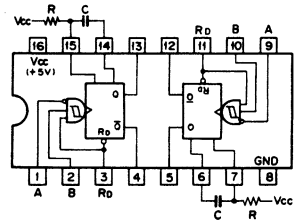
COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

SN74LS221NS (TI) FLAT PACKAGE
TTL MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

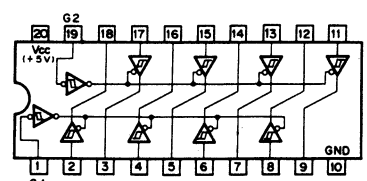


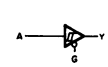
INPUTS			OUTPUTS	
Rd	A	B	Q	$\bar{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↓	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

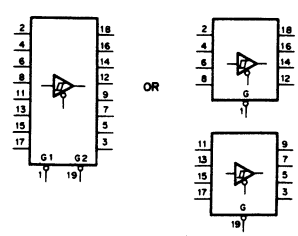
SN74LS244N (TI)
TTL 3-STATE SCHMITT TRIGGER BUFFER/DRIVER
— TOP VIEW —



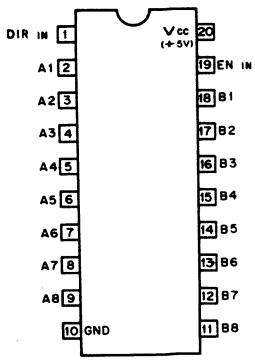


G	A	Y
0	0	0
0	1	1
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

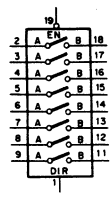


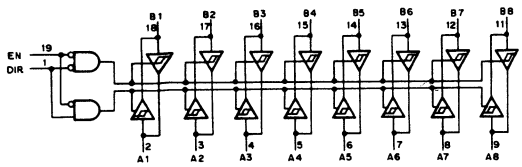
SN74LS245N (TI)
TTL BILATERAL SCHMITT TRIGGER BUS TRANSCEIVERS WITH 3-STATE OUTPUT
— TOP VIEW —



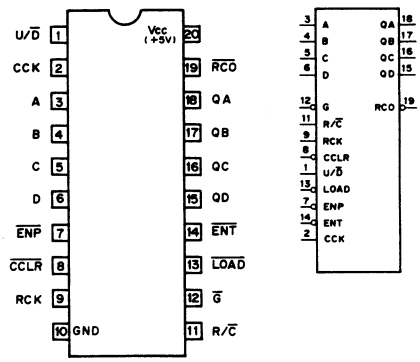
EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE.
HI-Z; HIGH IMPEDANCE



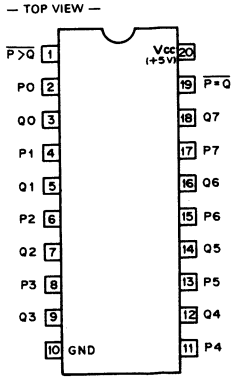


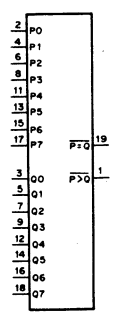
SN74LS697N
TTL SYNCHRONOUS UP/DOWN COUNTERS WITH OUTPUT REGISTERS AND MULTIPLEXED 3-STATE OUTPUTS
(BINARY COUNTER, DIRECT CLEAR)
— TOP VIEW —



CCK ;COUNTER CLOCK
CCLR ;COUNTER CLEAR
ENP ;FEATURE ENABLE P
ENT ;FEATURE ENABLE T
G ;OUTPUT GATE
R/C ;REGISTER/COUNTER SELECT
RCK ;REGISTER CLOCK
RCO ;RIPPLE-CARRY OUTPUT
U/D ;UP/DOWN

SN74LS683NS (TI) FLAT PACKAGE
TTL 8-BIT MAGNITUDE COMPARATOR
WITH TOTEM-POLE OUTPUTS
— TOP VIEW —

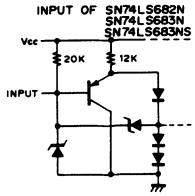




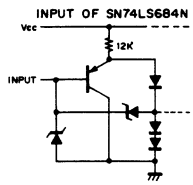
DATA INPUTS		OUTPUTS	
P0-P7	Q0-Q7	$\overline{P=Q}$	$\overline{P>Q}$
P=Q		0	1
P>Q		1	0
P<Q		1	1

1; HIGH LEVEL
0; LOW LEVEL

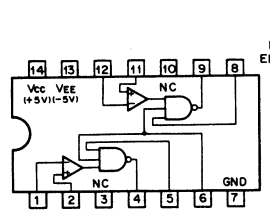
INPUT OF SN74LS682N
SN74LS683N
SN74LS683NS

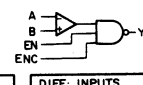


INPUT OF SN74LS684N



SN75107AN (TI)
LINE RECEIVER
— TOP VIEW —

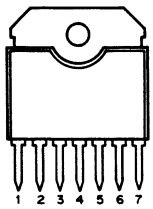




DIFF. INPUTS	EN	ENC	Y
B-A ≦ -25mV	X	X	1
|B-A| < 25mV	X	0	1
	0	X	1
	1	1	N.D
B-A ≧ 25mV	X	0	1
	0	X	1
	1	1	0

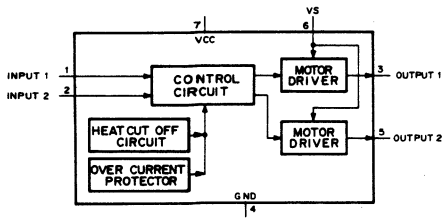
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
ND; NOT DEFINED

TA7267P (TOSHIBA)
DC MOTOR DRIVER
— PRINTED SIDE VIEW —

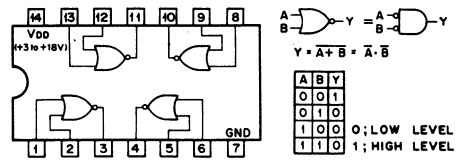


INPUTS		OUTPUTS		MODE
1	2	1	2	
1	1	0	0	BRAKE
0	1	0	1	ROTATION/ REV. ROTATION
1	0	1	0	REV. ROTATION / ROTATION
0	0	HI-Z		STOP

0 ; LOW LEVEL
1 ; HIGH LEVEL
HI-Z ; HIGH IMPEDANCE



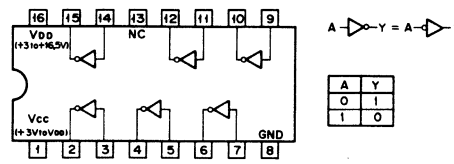
TC4001BF (TOSHIBA) FLAT PACKAGE
TC4001BP (TOSHIBA)
C-MOS 2-INPUT NOR GATE
— TOP VIEW —



A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

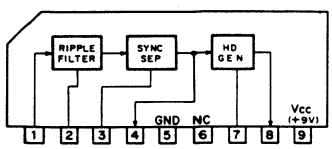
0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4009UBP (TOSHIBA)
C-MOS INVERTING TYPE BUFFER/CONVERTER (TO TTL LEVEL)
— TOP VIEW —

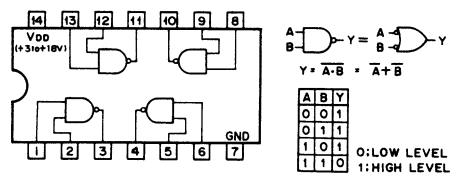


A	Y
0	1
1	0

TA7357AP (TOSHIBA)
SYNC SEPARATOR/HD PULSE GENERATOR
— SIDE VIEW —



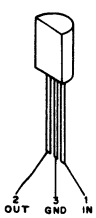
TC4011BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —

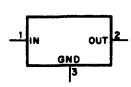


A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0:LOW LEVEL
1:HIGH LEVEL

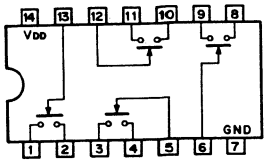
TA78L??AP (TOSHIBA)
POSITIVE VOLTAGE REGULATOR (150mA)





OUTPUT VOLTAGE	???
+5V	005
+6V	006
+7V	007
+7.5V	075
+8V	008
+9V	009
+10V	010
+12V	012
+13.2V	132
+15V	015
+18V	018
+20V	020
+24V	024

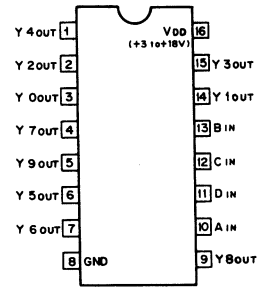
TC4016BP (TOSHIBA)
C-MOS BILATERAL SWITCH
— TOP VIEW —

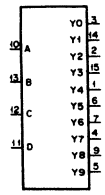


CONT IN	SW
0	OFF
1	ON

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4028BF (TOSHIBA) FLAT PACKAGE
C-MOS BCD TO DECIMAL DECODER
— TOP VIEW —

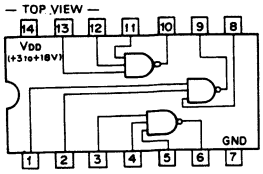


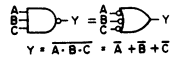


STATE	INPUTS D	C	B	A	OUTPUTS Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1	0	0	0	1	0	1	0	0	0	0	0	0	0	0
2	0	0	1	0	0	0	1	0	0	0	0	0	0	0
3	0	0	1	1	0	0	0	1	0	0	0	0	0	0
4	0	1	0	0	0	0	0	0	1	0	0	0	0	0
5	0	1	0	1	0	0	0	0	0	1	0	0	0	0
6	0	1	1	0	0	0	0	0	0	0	1	0	0	0
7	0	1	1	1	0	0	0	0	0	0	0	1	0	0
8	1	X	X	0	0	0	0	0	0	0	0	0	1	0
9	1	X	X	1	0	0	0	0	0	0	0	0	0	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC4023BF (TOSHIBA) FLAT PACKAGE
C-MOS 3-INPUT NAND GATE
— TOP VIEW —

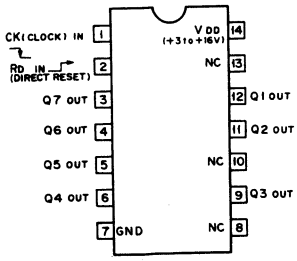


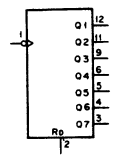


A	B	C	Y
X	X	0	1
X	0	X	1
0	X	X	1
1	1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

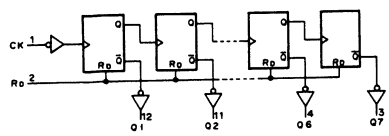
TC4024BF (TOSHIBA) FLAT PACKAGE
C-MOS ASYNCHRONOUS 7-BIT BINARY COUNTER
— TOP VIEW —



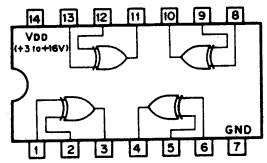


COUNT	INPUTS CK	RD	OUTPUTS Q7	Q6	Q5	Q4	Q3	Q2	Q1
0	X	1	0	0	0	0	0	0	0
1	↓	0	0	0	0	0	0	0	1
2	↓	0	0	0	0	0	0	1	0
3	↓	0	0	0	0	0	0	1	1
4	↓	0	0	0	0	0	1	0	0
125	↓	0	1	1	1	1	1	0	1
126	↓	0	1	1	1	1	1	1	0
127	↓	0	1	1	1	1	1	1	1
—	0	0	NO CHANGE						
—	1	0							

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE



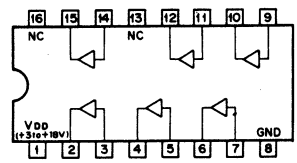
TC4030BF (TOSHIBA) FLAT PACKAGE
TC4030BP (TOSHIBA)
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

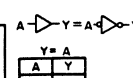


A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4050BF (TOSHIBA) FLAT PACKAGE
TC4050BP (TOSHIBA)
C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —

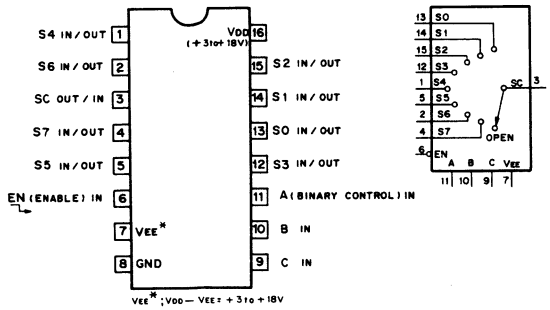




A	Y
0	0
1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4051BF (TOSHIBA) FLAT PACKAGE
C-MOS 8-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

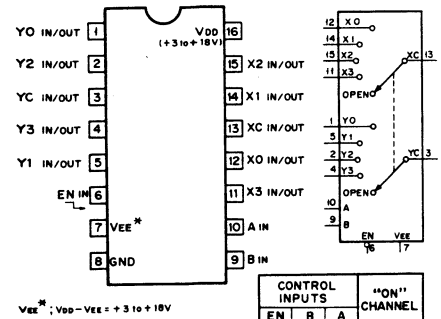


VEE* ; VDD − VEE = +3 to +18V

EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC4052BF (TOSHIBA) FLAT PACKAGE
C-MOS 4-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

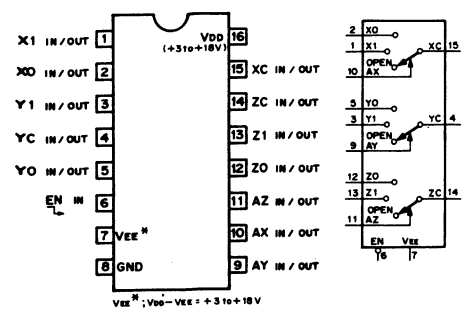


VEE* ; VDD − VEE = +3 to +18V

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

TC4053BF (TOSHIBA) FLAT PACKAGE
TC4053BP (TOSHIBA)
C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
— TOP VIEW —

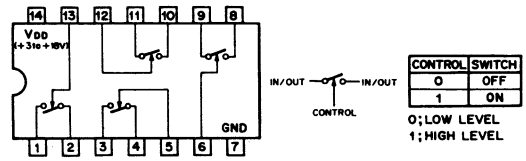


VEE* ; VDD − VEE = +3 to +18V

CONT. INPUTS		ON CHANNEL
EN	A (X, Y, Z)	
0	0	0
0	1	1
1	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

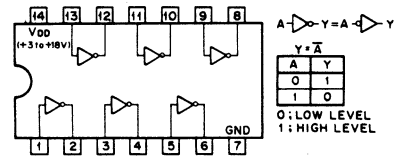
TC4066BF (TOSHIBA)
C-MOS BILATERAL ANALOG SWITCH
— TOP VIEW —



CONTROL	SWITCH
0	OFF
1	ON

0 ; LOW LEVEL
1 ; HIGH LEVEL

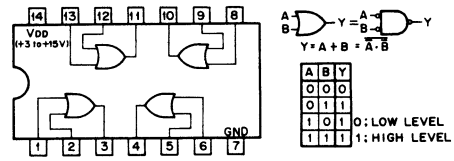
TC4069UBF (TOSHIBA) FLAT PACKAGE
TC4069UBP (TOSHIBA)
C-MOS INVERTER
— TOP VIEW —



A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

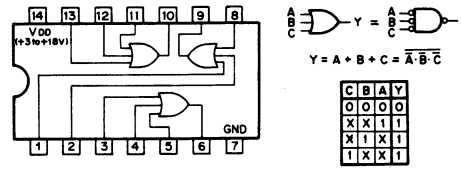
TC4071BF (TOSHIBA) FLAT PACKAGE
TC4071BP (TOSHIBA)
C-MOS 2-INPUT OR GATE
— TOP VIEW —



A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

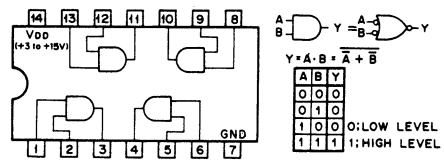
TC4075BF (TOSHIBA) FLAT PACKAGE
C-MOS 3-INPUT OR GATE
— TOP VIEW —



C	B	A	Y
0	0	0	0
X	X	1	1
X	1	X	1
1	X	X	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

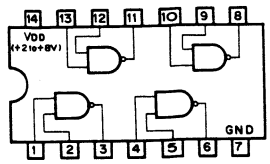
TC4081BF (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT AND GATE
— TOP VIEW —

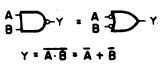


A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC40H000F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT NAND GATE
— TOP VIEW —



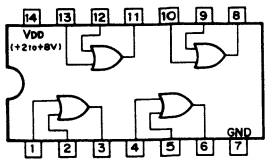


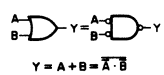
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TC40H032F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT POSITIVE-OR GATE
— TOP VIEW —



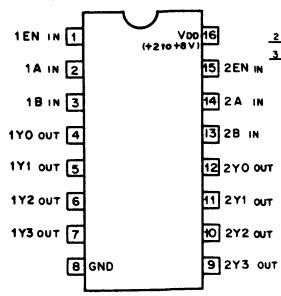


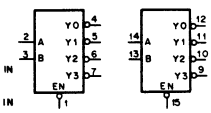
$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

0:LOW LEVEL
1:HIGH LEVEL

TC40H139F (TOSHIBA) FLAT PACKAGE
C-MOS 2-TO-4-LINE DECODER/DEMULTIPLXER
— TOP VIEW —

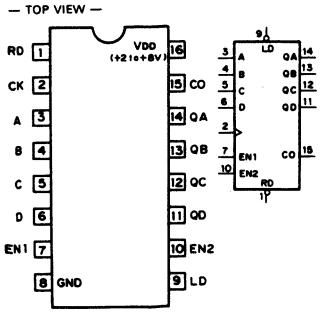




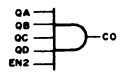
INPUTS			OUTPUTS			
EN	B	A	Y3	Y2	Y1	Y0
0	0	0	1	1	1	0
0	0	1	1	1	0	1
0	1	0	1	0	1	1
0	1	1	0	1	1	1
1	X	X	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC40H163F (TOSHIBA) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —



CARRY OUTPUT "CO"



CO GOES HIGH WHEN EN2 IS HIGH AND COUNT IS "15."

MODE SELECTION

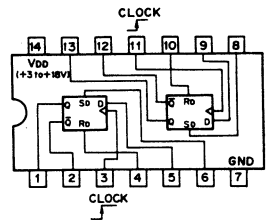
CONT. INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC504013BF (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —



DIRECT R-S FLIP FLOP

Sn	Rn	Q	$\overline{Q}$
0	0	Qn	$\overline{Qn}$
0	1	0	1
1	0	1	0
1	1	0	1

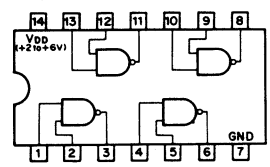
D-TYPE FLIP FLOP

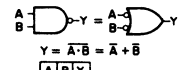
CKn	CKn+1
D	Q
0	0
1	1

CLOCK CK; ⌐¬
CKn ; BEFORE CLOCK
CKn+1 ; AFTER CLOCK

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC74HC00F (TOSHIBA) FLAT PACKAGE
TC74HC00P (TOSHIBA)
C-MOS 2-INPUT NAND GATE
— TOP VIEW —



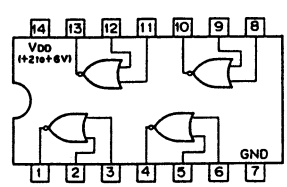


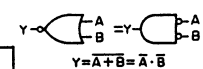
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0; LOW LEVEL
1; HIGH LEVEL

TC74HC02F (TOSHIBA) FLAT PACKAGE
TC74HC02P (TOSHIBA)
uPD74HC02C (NEC)
C MOS 2-INPUT POSITIVE-NOR GATE
— TOP VIEW —



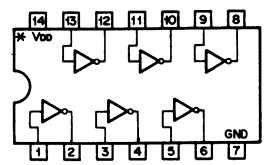


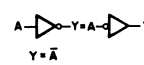
$Y = \overline{A + B} = \overline{A} \cdot \overline{B}$

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0

0:LOW LEVEL
1:HIGH LEVEL

TC74HC04F (TOSHIBA) FLAT PACKAGE
TC74HC04P (TOSHIBA)
TC74HCU04F (TOSHIBA) FLAT PACKAGE
TC74HCU04P (TOSHIBA)
C-MOS INVERTER
— TOP VIEW —





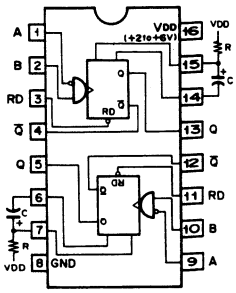
$Y = \overline{A}$

A	Y
0	1
1	0

0:LOW LEVEL
1:HIGH LEVEL

* VDD HC, HCU; +2 to +6V
HCT; +5V

TC74HC123F (TOSHIBA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

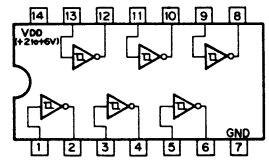


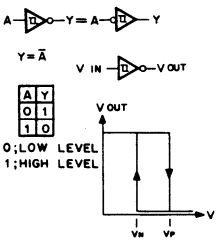
INPUT			OUTPUT	
RD	A	B	Q	$\bar{Q}$
0	X	X	0	1
1	1	X	0	1
1	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

OUTPUT PULSE WIDTH = 0.46CR

TC74HC14F (TOSHIBA) FLAT PACKAGE
TC74HC14P (TOSHIBA)
C-MOS SCHMITT TRIGGER INVERTER
— TOP VIEW —



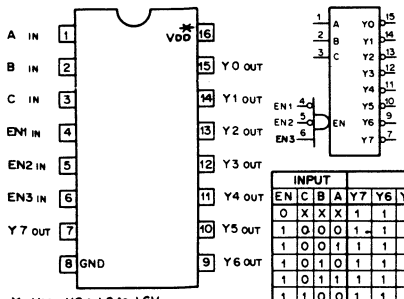


A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

VDD	VH	VL
2.0V	0.75V	1.25V
4.5V	1.9V	2.7V
6.0V	2.6V	3.6V

TC74HC138F (TOSHIBA) FLAT PACKAGE
TC74HC138P (TOSHIBA)
C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER
— TOP VIEW —



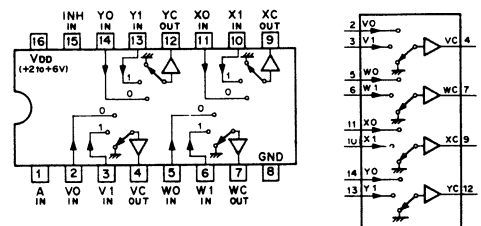
✱ VDD HC ; +2 to +6V
HCT ; +5V

INPUT				OUTPUT							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

EN = $\overline{EN1} \cdot \overline{EN2} \cdot EN3$

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

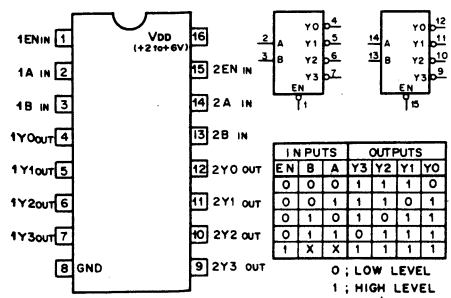
TC74HC157P (TOSHIBA)
C-MOS 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
— TOP VIEW —



CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	GND

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

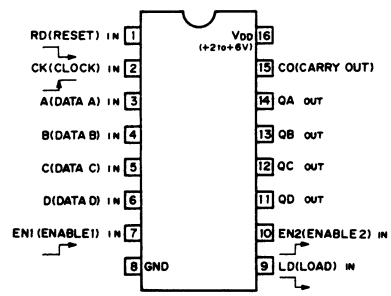
TC74HC139F (TOSHIBA) FLAT PACKAGE
TC74HC139P (TOSHIBA)
C-MOS 1-OF-4 DECODER/DEMULTIPLEXER
— TOP VIEW —

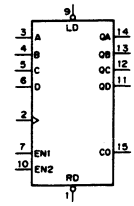


INPUTS			OUTPUTS			
EN	B	A	Y3	Y2	Y1	Y0
0	0	0	1	1	1	0
0	0	1	1	1	0	1
0	1	0	1	0	1	1
0	1	1	0	1	1	1
1	X	X	1	1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC74HC160F (TOSHIBA) FLAT PACKAGE
C-MOS SYNCHRONOUS PRESETTABLE 4-BIT DECADE COUNTER
— TOP VIEW —



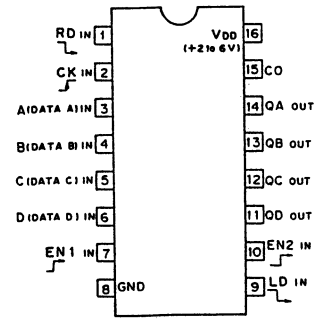


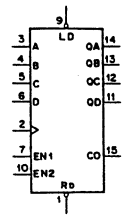
MODE SELECTION

CONTROL INPUTS					MODE
RD	LD	EN1	EN2	CK	
0	X	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	↑	PRESET (SYNCRONOUS)
1	1	0	X	↑	NO COUNT
1	1	X	0	↑	NO COUNT
1	1	1	1	↑	COUNT

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC74HC163F (TOSHIBA) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
— TOP VIEW —

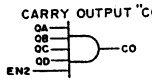




MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

CARRY OUTPUT "CO"

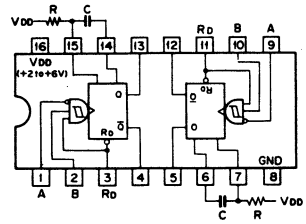


CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

TC74HC221F (TOSHIBA) FLAT PACKAGE
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
— TOP VIEW —

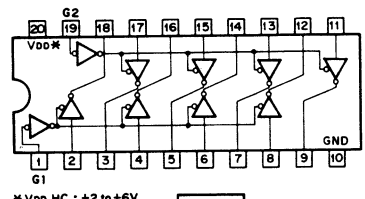


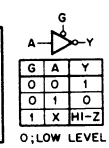
INPUTS			OUTPUTS	
RD	A	B	Q	Q̄
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⊓	⊔
1	↓	1	⊓	⊔
↑	0	1	⊓	⊔

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

OUTPUT PULSE WIDTH = 0.7CR

TC74HC240P (TOSHIBA)
C-MOS 3-STATE INVERTER/LINE DRIVER
— TOP VIEW —

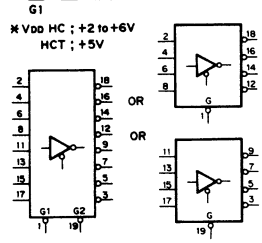




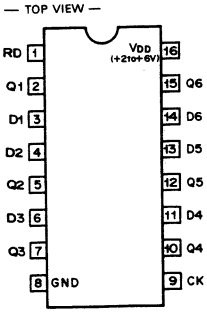
G	A	Y
0	0	1
0	1	0
1	X	HI-Z

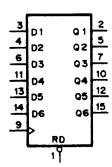
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

* VDD HC ; +2 to +6V
HCT ; +5V



TC74HC174F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP-FLOP WITH RESET
— TOP VIEW —

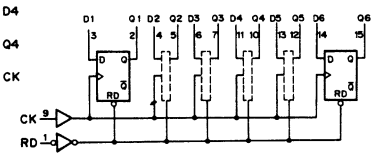




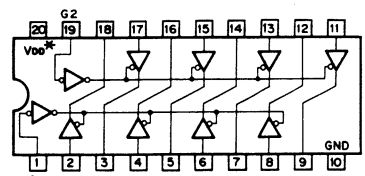
EACH FLIP-FLOP

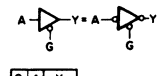
INPUT			OUT
RD	CK	D	Q
0	X	X	0
1	⊓	0	0
1	⊓	1	1
1	0	X	Q0

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE



TC74HC244F (TOSHIBA) FLAT PACKAGE
TC74HC244P (TOSHIBA)
C-MOS BUS BUFFER WITH 3-STATE OUTPUT
— TOP VIEW —

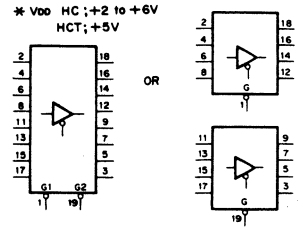




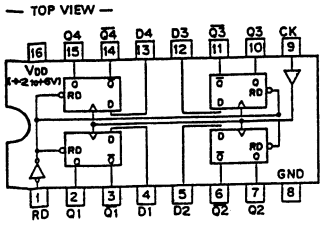
G	A	Y
0	0	0
0	1	1
1	X	HI-Z

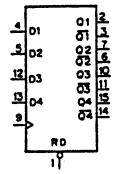
0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
HI-Z; HIGH IMPEDANCE

* VDD HC ; +2 to +6V
HCT ; +5V



TC74HC175F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP-FLOP WITH RESET
— TOP VIEW —

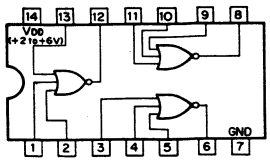


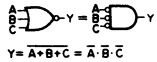


RD	CK	D	Q	Q̄
0	X	X	0	1
1	⊓	1	1	0
1	⊓	0	0	1
1	0	X	Q0	Q̄0

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

TC74HC27F (TOSHIBA) FLAT PACKAGE
C-MOS 3-LINE POSITIVE-NOR GATE
— TOP VIEW —

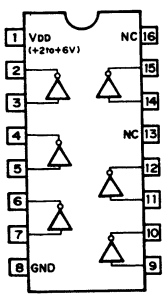


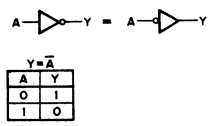


A	B	C	Y
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

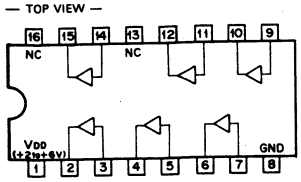
TC74HC4049F (TOSHIBA) FLAT PACKAGE
C-MOS HEX BUFFER/CONVERTER (INVERTING)
— TOP VIEW —

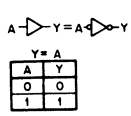




0 ; LOW LEVEL
1 ; HIGH LEVEL

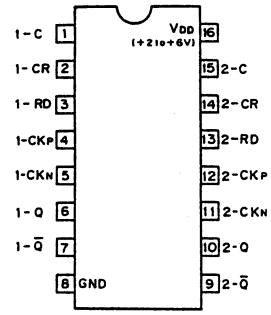
TC74HC4050F (TOSHIBA) FLAT PACKAGE
TC74HC4050P (TOSHIBA)
C-MOS NON-INVERTING TYPE BUFFER/CONVERTER
— TOP VIEW —

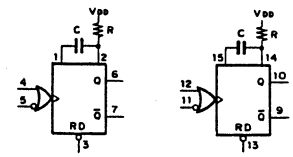




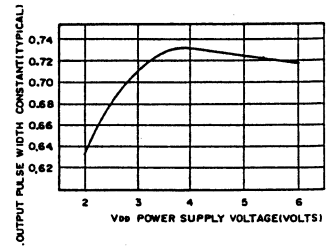
0 ; LOW LEVEL
1 ; HIGH LEVEL

TC74HC4538P (TOSHIBA)
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
— TOP VIEW —

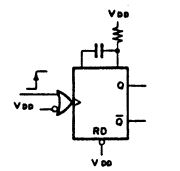




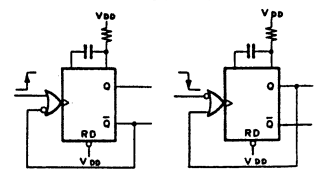
OUTPUT PULSE WIDTH = k·C·R



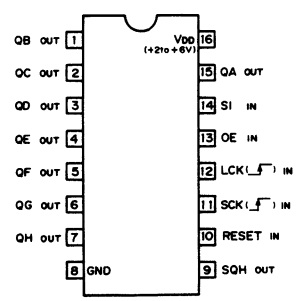
RETRIGGERABLE M.M.V

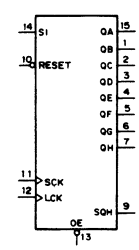


NON-RETRIGGERABLE M.M.V

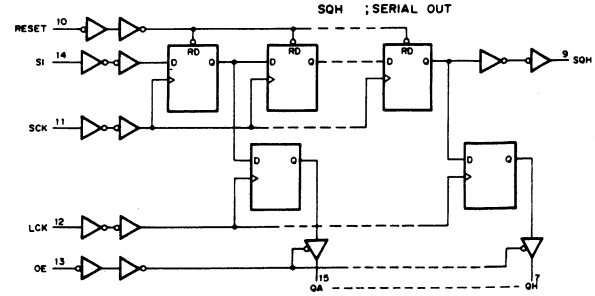


TC74HC595P (TOSHIBA)
C-MOS 8-BIT SERIAL-INPUT/SERIAL- OR PARALLEL-OUTPUT
SHIFT REGISTER WITH LATCHED 3-STATE OUTPUT
— TOP VIEW —

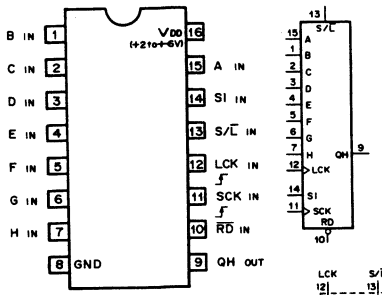


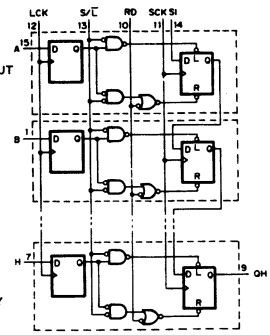


OE ; OUTPUT ENABLE INPUT
LCK ; LATCH CLOCK INPUT
SCK ; SHIFT CLOCK INPUT
RESET ; SHIFT-REGISTER RESET INPUT
SI ; SERIAL IN
QA-QH ; PARALLEL OUTPUTS
SQH ; SERIAL OUT



TC74HC597P (TOSHIBA)
CMOS 8-BIT LATCH/SHIFT REGISTER
— TOP VIEW —



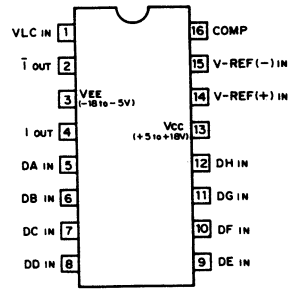


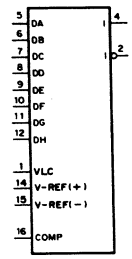
SI ; SERIAL DATA INPUT
S/L ; SERIAL SHIFT/PARALLEL LOAD INPUT
LCK ; LATCH CLOCK INPUT
SCK ; SHIFT CLOCK INPUT
RD ; RESET INPUT
A-H ; PARALLEL DATA INPUTS

INPUTS						OUTPUT
RD	LD	LCK	SCK	SI	A-H	QH
0	X	X	X	X	X	0
1	1	↑	Q1, ↓	X	a-h	NO CHANGE
1	0	↑	X	X	a-h	h
1	1	X	↑	X	X	QGn

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
a-h ; DATA AT INPUTS A-H, RESPECTIVELY

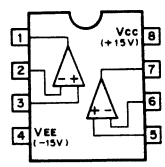
TD62901P (TOSHIBA)
HIGH SPEED 8-BIT D/A CONVERTER
— TOP VIEW —



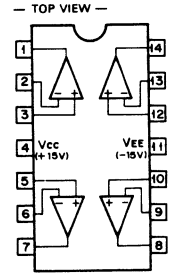


COMP ; COMPENSATION
DA-DH ; BINARY DATA
I ; COMPLEMENTARY CURRENT
V-REF ; REFERENCE VOLTAGE
VLC ; THRESHOLD LEVEL CONTROL

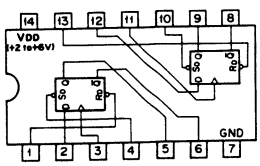
TL082CP (TI)
TL082CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —



TL084CN (TI)
TL084CNS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
(J FET-INPUT)
— TOP VIEW —



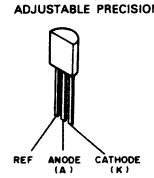
TC74HC74F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
— TOP VIEW —

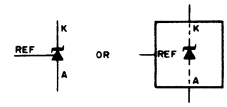


INPUTS				OUTPUTS	
So	Ro	CK	D	Qn+1	$\overline{Qn+1}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	$\overline{Qn}$

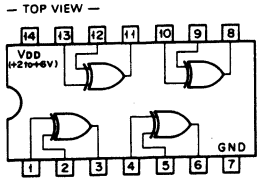
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
1* ; NONSTABLE

TL431CLPB (TI)
ADJUSTABLE PRECISION SHUNT REGULATOR





TC74HC86F (TOSHIBA) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
— TOP VIEW —

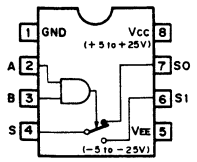


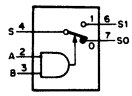
$Y = \bar{A} \cdot B + A \cdot \bar{B}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TL601CPS (TI) FLAT PACKAGE
P-MOS ANALOG SWITCH
— TOP VIEW —

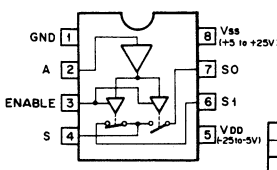


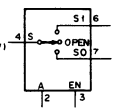


CONT IN		ON CHANNEL
A	B	
0	0	SO
0	1	SO
1	0	SO
1	1	S1

0; LOW LEVEL
1; HIGH LEVEL

TL607CPS (TI) FLAT PACKAGE
P-MOS ANALOG SWITCH
— TOP VIEW —

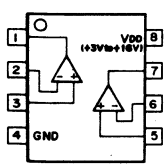




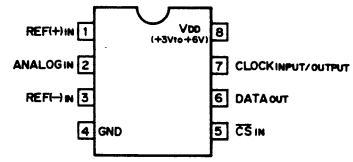
INPUTS		SW
A	EN	
X	0	OPEN
0	1	6 7
1	1	6 7

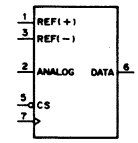
0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

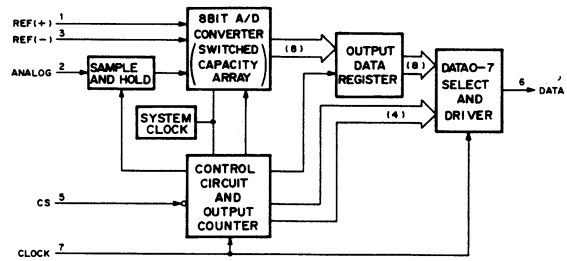
TLC27M2CPS (TI) FLAT PACKAGE
OPERATIONAL AMPLIFIER
— TOP VIEW —



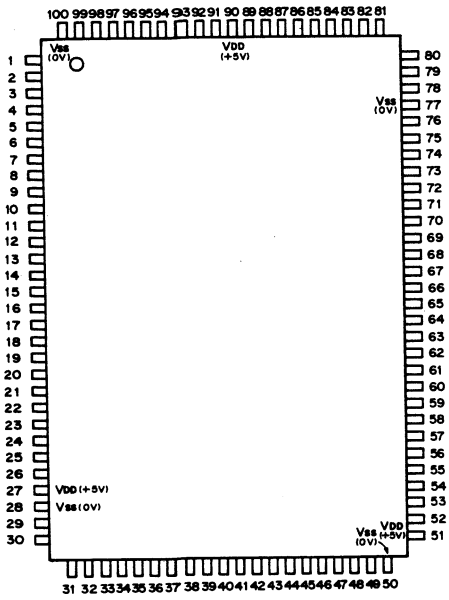
TLC548CP (TI)
C-MOS 8 BIT A/D CONVERTER
— TOP VIEW —



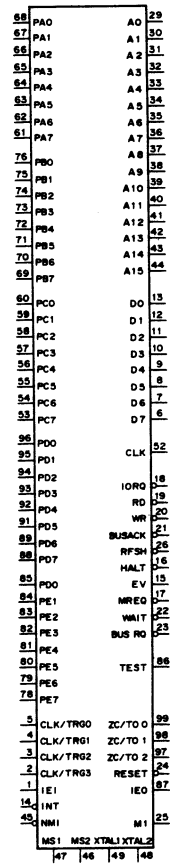




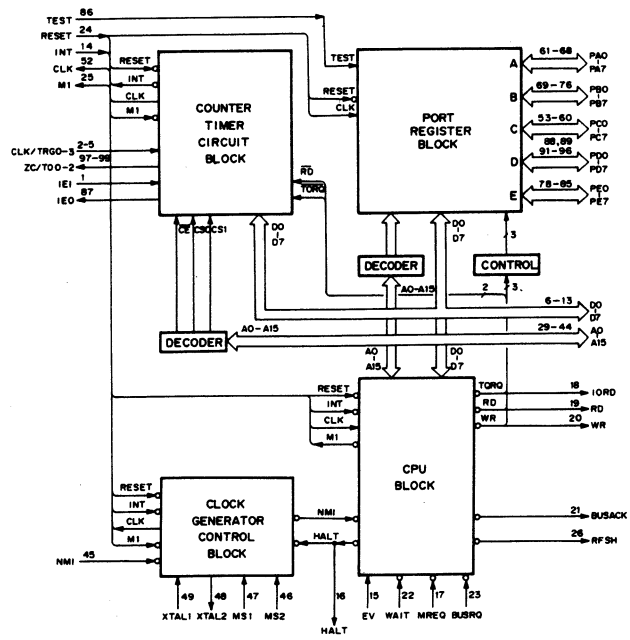
TMPZ84C011AF (TOSHIBA)
TMPZ84C011AF-6 (TOSHIBA)
C-MOS 8 BIT MICROPROCESSOR
— TOP VIEW —



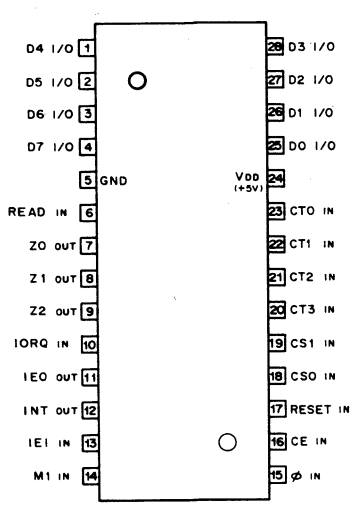
NO.	IN	OUT	SYMBOL	NO.	IN	OUT	SYMBOL
1	○		IEI	51		○	Vcc
2	○		CLK/TRG3	52		○	CLK
3	○		CLK/TRG2	53	○	○	PC7
4	○		CLK/TRG1	54	○	○	PC6
5	○		CLK/TRG0	55	○	○	PC5
6	○	○	D7	56	○	○	PC4
7	○	○	D6	57	○	○	PC3
8	○	○	D5	58	○	○	PC2
9	○	○	D4	59	○	○	PC1
10	○	○	D3	60	○	○	PC0
11	○	○	D2	61	○	○	PA7
12	○	○	D1	62	○	○	PA6
13	○	○	D0	63	○	○	PA5
14	○		$\overline{INT}$	64	○	○	PA4
15	○		EV	65	○	○	PA3
16		○	$\overline{HALT}$	66	○	○	PA2
17		○	$\overline{MREQ}$	67	○	○	PA1
18		○	$\overline{IORQ}$	68	○	○	PA0
19		○	$\overline{RD}$	69	○	○	PB7
20		○	$\overline{WR}$	70	○	○	PB6
21		○	$\overline{BUSACK}$	71	○	○	PB5
22	○		$\overline{WAIT}$	72	○	○	PB4
23	○		$\overline{BUSREQ}$	73	○	○	PB3
24	○		$\overline{RESET}$	74	○	○	PB2
25		○	$\overline{MT}$	75	○	○	PB1
26		○	$\overline{RFSH}$	76	○	○	PB0
27			Vcc	77			Vss
28			Vss	78	○	○	PE7
29		○	A0	79	○	○	PE6
30		○	A1	80	○	○	PE5
31		○	A2	81	○	○	PE4
32		○	A3	82	○	○	PE3
33		○	A4	83	○	○	PE2
34		○	A5	84	○	○	PE1
35		○	A6	85	○	○	PE0
36		○	A7	86	○		TEST
37		○	A8	87		○	IEO
38		○	A9	88	○	○	PD7
39		○	A10	89	○	○	PD6
40		○	A11	90			Vcc
41		○	A12	91	○	○	PD5
42		○	A13	92	○	○	PD4
43		○	A14	93	○	○	PD3
44		○	A15	94	○	○	PD2
45	○		$\overline{NMI}$	95	○	○	PD1
46	○		MS2	96	○	○	PD0
47	○		MS1	97		○	ZC/TO2
48		○	XTAL2	98		○	ZC/TO1
49	○		XTAL1	99		○	ZC/TO0
50			Vss	100			Vss

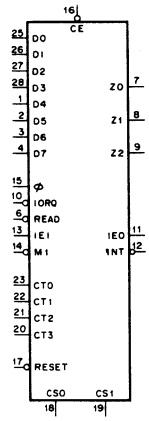


A0–A15	3-STATE ADDRESS BUS OUTPUTS
BUSACK	BUS ACKNOWLEDGE OUTPUT
BUS REQ	BUS REQUEST INPUT
CLK	CLOCK OUTPUT
CLK/TRG0–3	EXTERNAL CLOCK / TIMER TRIGGER0–3 INPUTS
D0–D7	3-STATE DATA BUS INPUTS/OUTPUTS
EV	EVALUATER INPUT
HALT	HALT OUTPUT
IEI/IEO	CTC INTERRUPT ENABLE INPUT/OUTPUT
INT	MASKABLE INTERRUPT REQUEST INPUT
IORQ	3-STATE I/O REQUEST OUTPUT
M1	3-STATE MACHINE CYCLE 1 OUTPUT
MREQ	3-STATE REQUEST OUTPUT
MS1/MS2	MODE SELECT 1/2 INPUTS
NMI	NON-MASKABLE INTERRUPT REQUEST INPUT
PA0–PA7, PB0–PB7, PC0–PC7, PD0–PD7, PE0–PE7	3-STATE I/O PORT
RD	3-STATE READ OUTPUT
RESET	RESET INPUT
RFSH	REFRESH OUTPUT
TEST	TEST INPUT
WAIT	WAIT REQUEST INPUT
WR	3-STATE WRITE OUTPUT
ZC/TO0–2	ZERO COUNT/TIME OUT 0–2 OUTPUTS



TMPZ84C30AP-6 (TOSHIBA)
C-MOS COUNTER TIMER CIRCUIT
— TOP VIEW —



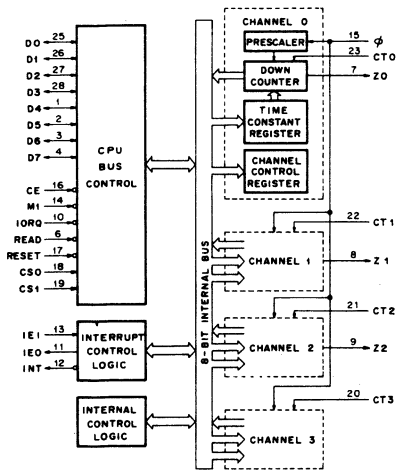


φ ; SYSTEM CLOCK
CE ; CHIP ENABLE
CSO,CS1 ; CHANNEL SELECT
CTO-CT3 ; EXTERNAL CLOCK/TIMER TRIGGER
DO-D7 ; 3-STATE DATA INPUT/OUTPUT
IEI ; INTERRUPT ENABLE INPUT
IEO ; INTERRUPT ENABLE OUTPUT
INT ; INTERRUPT REQUEST (OPEN DRAIN)
IORQ ; I/O REQUEST
M1 ; MACHINE CYCLE 1
READ ; READ CYCLE STATUS
ZO-Z2 ; ZERO COUNT/TIME OUT

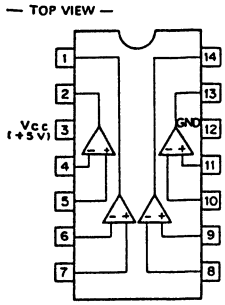
CHANNEL SELECT FUNCTION

CS1	CSO	SELECTED CHANNEL
0	0	0
0	1	1
1	0	2
1	1	3

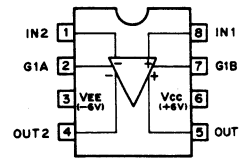
0;LOW LEVEL
1;HIGH LEVEL



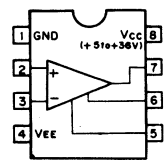
uPC339C (NEC)
COMPARATOR
— TOP VIEW —



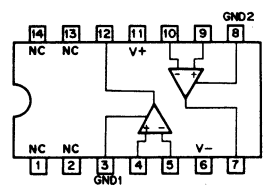
uPC1663G (NEC) FLAT PACKAGE
WIDEBAND VIDEO AMPLIFIER
— TOP VIEW —



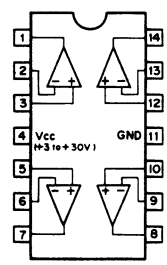
uPC311G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —



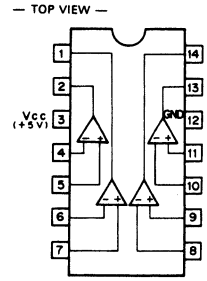
uPC319G2 (NEC) FLAT PACKAGE
VOLTAGE COMPARATOR
— TOP VIEW —



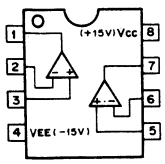
uPC324C (NEC)
QUAD. OP AMPLIFIER
— TOP VIEW —



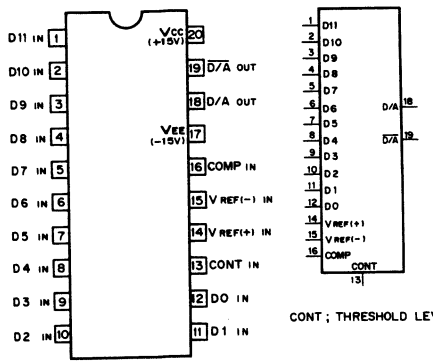
uPC339G2 (NEC) FLAT PACKAGE
COMPARATOR
— TOP VIEW —



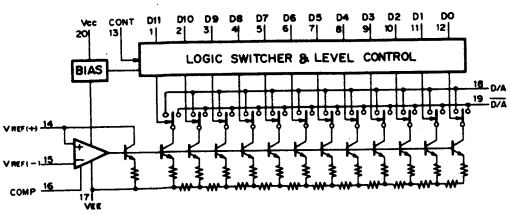
uPC4558C (NEC)
OPERATIONAL AMPLIFIER
— TOP VIEW —



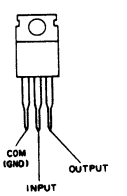
uPC848C (NEC)
12-BIT D/A CONVERTER WITH OPEN COLLECTOR OUTPUT
— TOP VIEW —

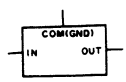


CONT ; THRESHOLD LEVEL CONTROL



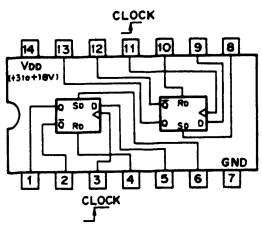
uPC79??H (NEC)
NEGATIVE VOLTAGE REGULATOR (1A)
— SIDE VIEW —





OUTPUT VOLTAGE	AN79??	FS79??	uA79??UC	uPC79??H	MC79??CT
-2V	------	------	--------	--------	MC7902CT
-5V	AN7905	FS7905	uA7905UC	uPC7905H	MC7905CT
-5.2V	------	------	--------	--------	MC7905.2CT
-6V	AN7906	------	uA7906UC	--------	MC7906CT
-7V	AN7907	------	--------	--------	--------
-8V	AN7908	------	uA7908UC	uPC7908H	MC7908CT
-9V	AN7909	------	--------	--------	--------
-10V	AN7910	------	--------	--------	--------
-12V	AN7912	------	uA7912UC	uPC7912H	MC7912CT
-15V	AN7915	------	uA7915UC	uPC7915H	MC7915CT
-18V	AN7918	------	uA7918UC	uPC7918H	MC7918CT
-20V	AN7920	------	--------	--------	--------
-24V	AN7924	------	uA7924UC	uPC7924H	MC7924CT

uPD4013BC (NEC)
C-MOS D-TYPE FLIP-FLOP WITH DIRECT SET/RESET
— TOP VIEW —



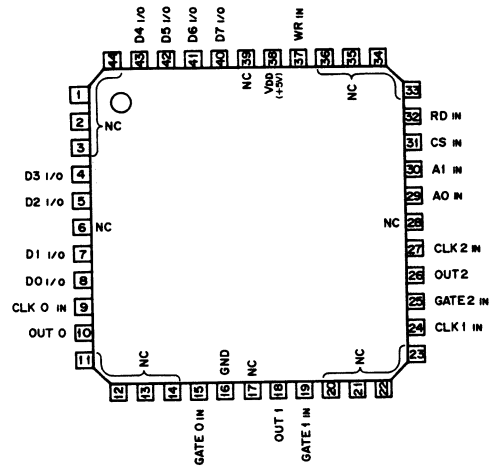
DIRECT R-S FLIP FLOP			
Sn	Rn	Q	Q
0	0	On	On
0	1	0	1
1	0	1	0
1	1	1	1

O:LOW LEVEL
1:HIGH LEVEL

D-TYPE FLIP FLOP	
CKn	CKn+1
D	Q
0	0
1	1

CLOCK CK;
CKn;BEFORE CLOCK
CKn+1;AFTER CLOCK

uPD71054G (NEC) FLAT PACKAGE
C-MOS PROGRAMMABLE TIMER COUNTER
— TOP VIEW —



FUNCTION TABLE

INPUTS					FUNCTION
CS	RD	WR	A1	A0	
0	1	0	0	0	Load Counter No. 0
0	1	0	0	1	Load Counter No. 1
0	1	0	1	0	Load Counter No. 2
0	1	0	1	1	Control Word
0	0	1	0	0	Read Counter 0
0	0	1	0	1	Read Counter 1
0	0	1	1	0	Read Counter 2
0	0	1	1	1	No-Operation (HI-Z)
1	X	X	X	X	Disable (HI-Z)
0	1	1	X	X	No-Operation (HI-Z)

D7-D0	8-BIT DATA I/O
CLK 0-2	COUNTER CLOCK
GATE 0-2	COUNTER GATE
OUT 0-2	COUNTER OUTPUT
RD	READ COUNTER
WR	WRITE CMD OR DATA
CS	CHIP SELECT
A0,A1	COUNTER SELECT

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE
HI-Z;HIGH IMPEDANCE

CONTROL WORD FORMAT

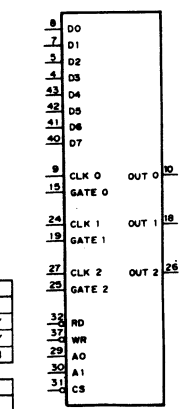
D7	D6	D5	D4	D3	D2	D1	D0
SC1	SC0	RL1	RL0	M2	M1	M0	BCD

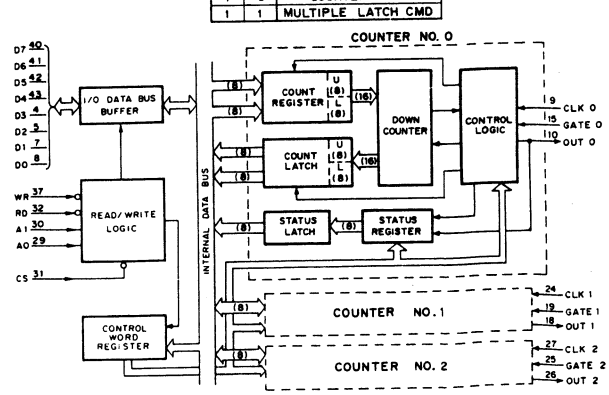
BCD	OPERATION
0	16-BIT BINARY
1	BCD(4-DECADE)

M2	M1	M0	MODE
0	0	0	0
0	0	1	1
X	1	0	2
X	1	1	3
1	0	0	4
1	0	1	5

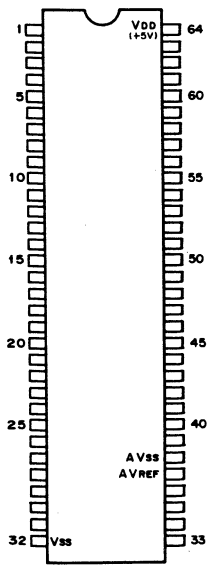
RL1	RL0	OPERATION
0	0	COUNTER LATCHING
0	1	READ/LOAD LSB ONLY
1	0	READ/LOAD MSB ONLY
1	1	LSB FIRST THEN MSB

SC1	SC0	SELECTED COUNTER
0	0	COUNTER No. 0
0	1	COUNTER No. 1
1	0	COUNTER No. 2
1	1	MULTIPLE LATCH CMD

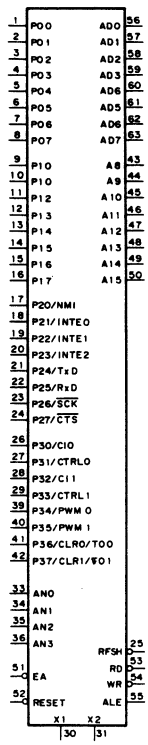




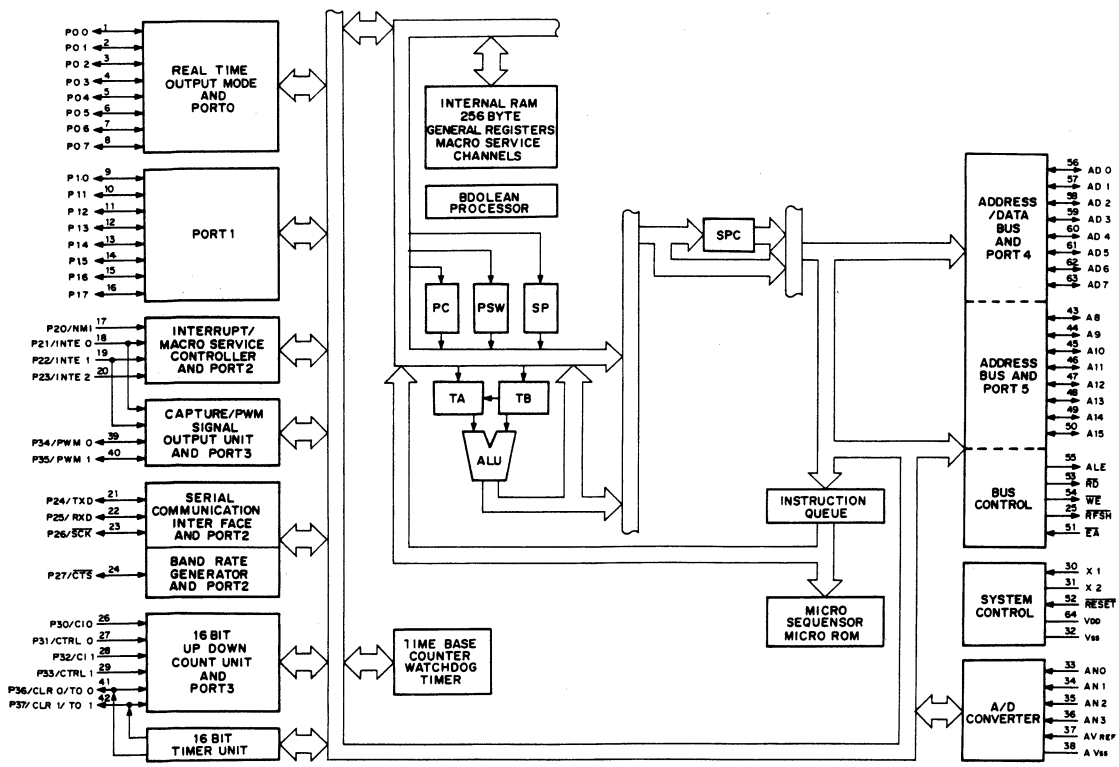
uPD78310CW (NEC)
C MOS 16/8 BIT ONE CHIP MICROCOMPUTER
— TOP VIEW —



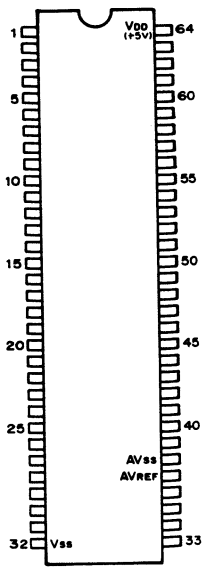
PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1	○	○	P00	33	○		AN0
2	○	○	P01	34	○		AN1
3	○	○	P02	35	○		AN2
4	○	○	P03	36	○		AN3
5	○	○	P04	37			AVREF
6	○	○	P05	38			AVss
7	○	○	P06	39	○	○	P34/PWM0
8	○	○	P07	40	○	○	P35/PWM1
9	○	○	P10	41	○	○	P36/CLR0/TO0
10	○	○	P11	42	○	○	P37/CLR1/TO1
11	○	○	P12	43	○	○	A8
12	○	○	P13	44	○	○	A9
13	○	○	P14	45	○	○	A10
14	○	○	P15	46	○	○	A11
15	○	○	P16	47	○	○	A12
16	○	○	P17	48	○	○	A13
17	○		P20/NMI	49	○	○	A14
18	○		P21/INTE0	50	○	○	A15
19	○		P22/INTE1	51	○	○	$\overline{EA}$
20	○		P23/INTE2	52	○	○	$\overline{RESET}$
21	○	○	P24/TxD	53		○	$\overline{RD}$
22	○	○	P25/RxD	54		○	$\overline{WR}$
23	○	○	P26/$\overline{SCK}$	55		○	ALE
24	○	○	P27/$\overline{CTS}$	56	○	○	AD0
25		○	$\overline{RFSH}$	57	○	○	AD1
26	○		P30/CI0	58	○	○	AD2
27	○		P31/CTRL0	59	○	○	AD3
28	○		P32/CI1	60	○	○	AD4
29	○		P33/CTRL1	61	○	○	AD5
30	○		X1	62	○	○	AD6
31			X2	63	○	○	AD7
32			Vss	64			VDD



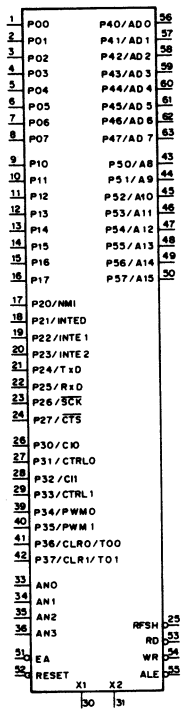

```
A8-A15      ; ADDRESS BUS OUT
AD0-AD7     ; ADDRESS/DATA BUS IN/OUT
ALE         ; ADDRESS LATCH ENABLE OUT
AN0-AN3     ; ANALOG SIGNAL IN
CI0,CI1     ; EXTERNAL COUNT CLOCK IN
CLR0,CLR1   ; COUNTER CLEAR/CAPTURE TRIGGER IN
CTRL0,CTRL1; COUNT UP/DOWN SELECT CONTROL IN
CTS         ; ASYNCHRONOUS MODE; TRANSMIT PERMISSION
                                 CONTROL IN
              I/O INTERFACE MODE; RECEIVER CLOCK IN/OUT
EA          ; EXTERNAL ACCESS IN
INTE0-INTE2; EXTERNAL INTERRUPT REQUEST IN
NMI         ; NON MASKABEL INTERRUPT REQUEST IN
P00-P07     ; PORT 0 (3 STATE) IN/OUT
P10-P17     ; PORT 1 (3 STATE) IN/OUT
P20-P27     ; PORT 2 (3 STATE) IN/OUT
P30-P37     ; PORT 3 (3 STATE) IN/OUT
PWM0,PWM1   ; PWM OUT
RD          ; READ STROBE OUT
RESET       ; RESET IN
RFSH        ; REFLESH OUT
RXD         ; SERIAL DATA OUT
SCK         ; I/O INTERFACE MODE; RECEIVER CLOCK OUT
TO0,TO1     ; PULSE OUT
TXD         ; SERIAL DATA IN
WR          ; WRITE STROBE OUT
X1,X2       ; CRYSTAL
```



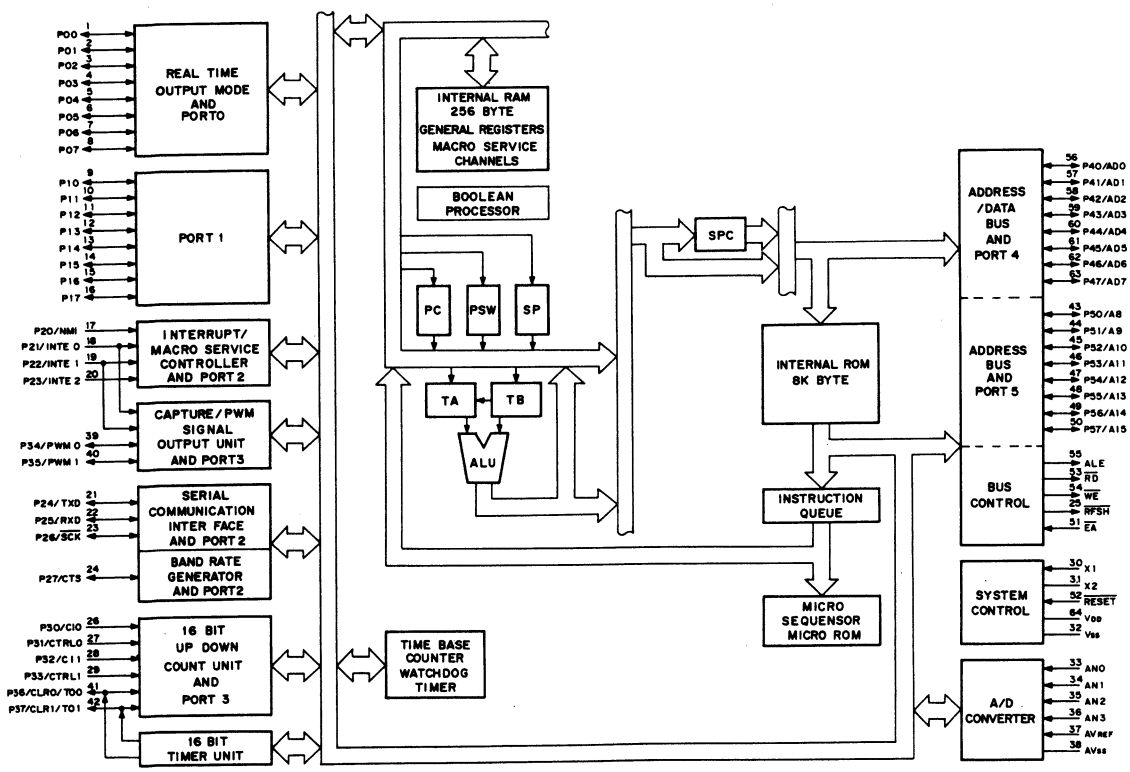
uPD78312CW (NEC)
C MOS 16/8 BIT ONE CHIP MICROCOMPUTER
— TOP VIEW —



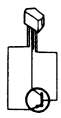
PIN NO	IN	OUT	SYMBOL	PIN NO	IN	OUT	SYMBOL
1	○	○	P00	33	○		AN0
2	○	○	P01	34	○		AN1
3	○	○	P02	35	○		AN2
4	○	○	P03	36	○		AN3
5	○	○	P04	37			AVREF
6	○	○	P05	38			AVss
7	○	○	P06	39	○	○	P34/PWM0
8	○	○	P07	40	○	○	P35/PWM1
9	○	○	P10	41	○	○	P36/CLR0/TO0
10	○	○	P11	42	○	○	P37/CLR1/TO1
11	○	○	P12	43	○	○	P50/A8
12	○	○	P13	44	○	○	P51/A9
13	○	○	P14	45	○	○	P52/A10
14	○	○	P15	46	○	○	P53/A11
15	○	○	P16	47	○	○	P54/A12
16	○	○	P17	48	○	○	P55/A13
17	○		P20/NMI	49	○	○	P56/A14
18	○		P21/INTE0	50	○	○	P57/A15
19	○		P22/INTE1	51	○		$\overline{EA}$
20	○		P23/INTE2	52	○		$\overline{RESET}$
21	○	○	P24/TxD	53		○	$\overline{RD}$
22	○	○	P25/RxD	54		○	$\overline{WR}$
23	○	○	P26/$\overline{SCK}$	55		○	ALE
24	○	○	P27/$\overline{CTS}$	56	○	○	P40/AD0
25		○	$\overline{RFSH}$	57	○	○	P41/AD1
26	○		P30/CI0	58	○	○	P42/AD2
27	○		P31/CTRL0	59	○	○	P43/AD3
28	○		P32/CI1	60	○	○	P44/AD4
29	○		P33/CTRL1	61	○	○	P45/AD5
30	○		X1	62	○	○	P46/AD6
31			X2	63	○	○	P47/AD7
32			Vss	64			VDD




```
A8-A15      ; ADDRESS BUS OUT
AD0-AD7     ; ADDRESS/DATA BUS IN/OUT
ALE         ; ADDRESS LATCH ENABLE OUT
AN0-AN3     ; ANALOG SIGNAL IN
CI0,CI1     ; EXTERNAL COUNT CLOCK IN
CLR0,CLR1   ; COUNTER CLEAR/CAPTURE TRIGGER IN
CTRL0,CTRL1 ; COUNT UP/DOWN SELECT CONTROL IN
CTS         ; ASYNCHRONOUS MODE; TRANSMIT PERMISSION
                                 CONTROL IN
              I/O INTERFACE MODE; RECEIVER CLOCK IN/OUT
EA          ; EXTERNAL ACCESS IN
INTE0-INTE2 ; EXTERNAL INTERRUPT REQUEST IN
NMI         ; NON MASKABEL INTERRUPT REQUEST IN
P00-P07     ; PORT 0 (3 STATE) IN/OUT
P10-P17     ; PORT 1 (3 STATE) IN/OUT
P20-P27     ; PORT 2 (3 STATE) IN/OUT
P30-P37     ; PORT 3 (3 STATE) IN/OUT
P40-P47     ; PORT 4 (3 STATE) IN/OUT
P50-P57     ; PORT 5 (3 STATE) IN/OUT
PWM0,PWM1   ; PWM OUT
RD          ; READ STROBE OUT
RESET       ; RESET IN
RFSH        ; REFLESH OUT
RXD         ; SERIAL DATA OUT
SCK         ; I/O INTERFACE MODE; RECEIVER CLOCK OUT
TO0,TO1     ; PULSE OUT
TXD         ; SERIAL DATA IN
WR          ; WRITE STROBE OUT
X1,X2       ; CRYSTAL
```



TRANSISTOR, (OTHER)



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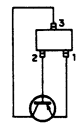

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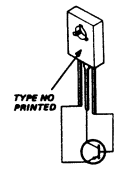

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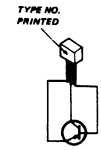

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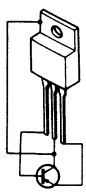

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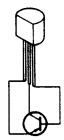

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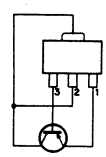

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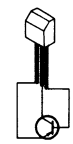

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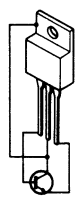

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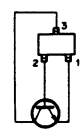
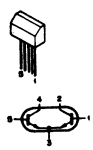


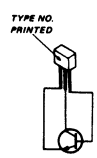
2SC1623
2SC2223
2SC2712
2SC2757
2SC3326N

2SC1762



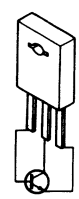
2SC2259

2SC2754
2SC2878

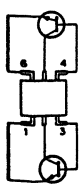


2SC2785

2SC2901

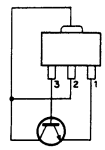


2SC3012

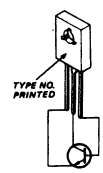


2SC3064

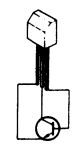
2SD1055



2SD1615A



2SD669A



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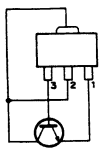
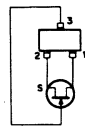
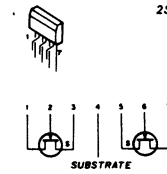
2SD774



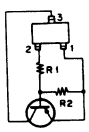
2SD999



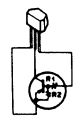
2SK209
2SK94



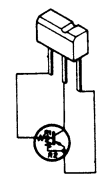
2SK389



DTA114EK (R1=10K, R2=10K)
DTA114TK (R1=10K, R2=∞)
DTA124EK (R1=22K, R2=22K)
DTA144EK (R1=47K, R2=47K)

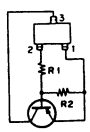


DTA124ES (R1=22K, R2=22K)
DTA124XS (R1=22K, R2=47K)

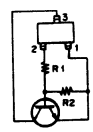


DTA144EF (R1=47K, R2=47K)

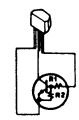
TOP VIEW



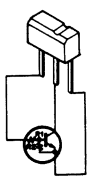
DTB123EK (R1=2.2K, R2=2.2K)



DTC124EK (R1=22K, R2=22K)
DTC144EK (R1=47K, R2=47K)
DTC144WK (R1=47K, R2=22K)

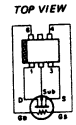


DTC124ES (R1=22K, R2=22K)
DTC124XS (R1=22K, R2=47K)



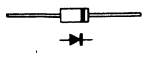
DTC144EF (R1=47K, R2=47K)

TOP VIEW

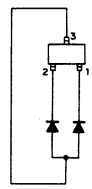


TX429M

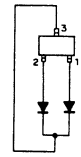
)IODE, (OTHER)



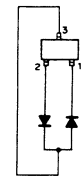
10E-2
1S2076
1SS119
ERB44-??



1S2835



1S2837



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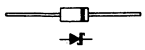
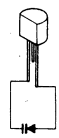
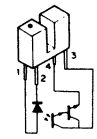


1SS97
1SS99



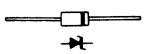
FC51M
FC54M

GL-5HD5 ; RED



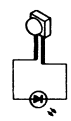
GP-1L52
GP-1L53

TOP VIEW



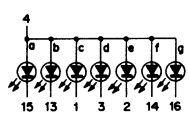
HZ ?A ?L
HZ ?ALL
HZ ?C ?L

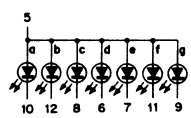
LB-402VK ; RED



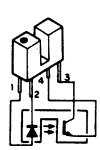
LN25RP ; RED

RD ? ?MB



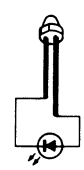


TLG255 ; GREEN
TLY255 ; YELLOW



TLP801A

TLUG154 ; GREEN



TLUR144 (RED)

The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

SECTION 19
SPARE PARTS AND FIXTURE

19-1. PARTS INFORMATION

1. The shaded and ⚠ -marked components are critical to safety. Replace only with the same components as specified.

2. Replacement parts supplied from the Sony Parts Center will sometimes have a different shape and outside view from the parts which are used in the unit. This is due to "accommodating improved parts and/or engineering changed" or "standardization of genuine parts".
   - This manual's exploded views and electrical spare parts lists indicate the part numbers of "the present standardized genuine parts".
   - Regarding engineering part changes by our engineering department, refer to Sony service bulletins and service manual supplements.

3. The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

4. Items with no part number and/or no description are not stocked because they are seldom required for routine service.

5. (T) after a spring description is shown on the exploded views in order to indicate the number of spring turns required for the use.
   (example)
   Spring, tension (24T); this spring must be cut at its 24th turn for actual use.

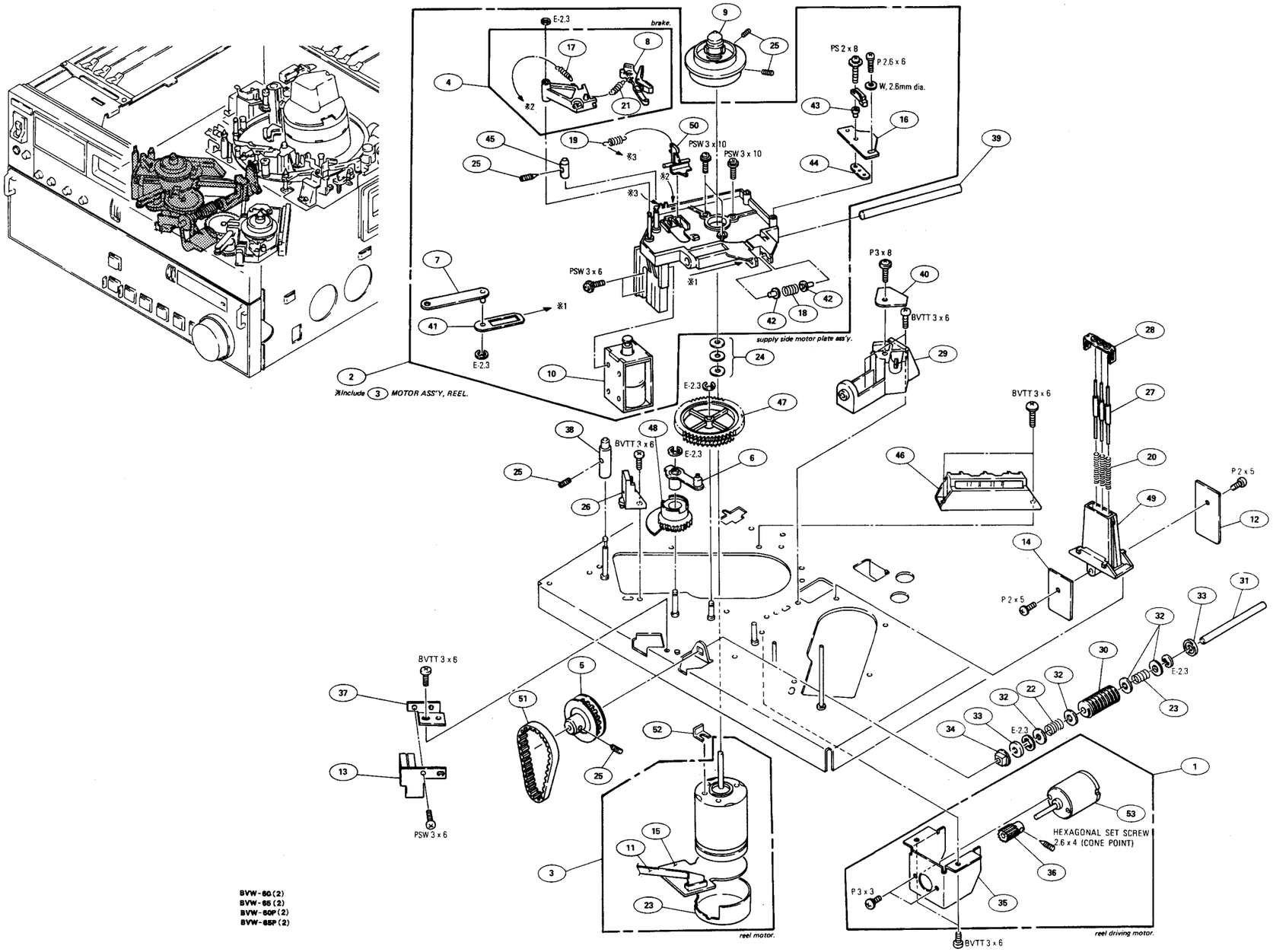
19-2. EXPLODED VIEW

- Exploded views are composed of the following blocks.

1. Supply Side Reel Chassis
   - supply reel table
   - supply motor plate
   - reel motor
   - reel drive motor
   - cassette detector
2. Take-up Side Reel Chassis
   - take-up reel table
   - take-up motor plate
   - reel motor
   - cassette detetctor
3. Head Drum, Staitionary Heads and Tape Guides Block
   - head drum ass'y
   - CTL head
   - TG-0 ass'y
   - audio/TC head
   - tape guide
   - capstan motor
   - slip ring
4. Threading Ring Block
   - threading ring
   - pinch roller
   - tape guide
   - ring sensor
5. T Drawer Arm Block
   - T drawer arm
   - tape beginning sensor
6. Supply Tension Regulator Block
   - supply tension regulator
7. Pinch Press Mechanism Block
   - pinch press mechanism
8. Gear Box Block
   - gear box
9. Function control Chassis Block
   - function control chassis
   - sub function control panel
   - search dial
   - hinge

10. Level Control Chassis Block
    level control chassis
    audio level meter
11. Cassette-up Compartment Block
    cassette-up compartment
12. Connector Panel Block
    connector panel
    ventilation fun
13. Switching Regulator Block
    switching regulator
    AC inlet
    ventilation fun
14. Printed Circuit Board Block (1)
    printed circuit board
    PCB guide
    shield plate
15. Printed Circuit Board Block (2)
    printed circuit board
16. Ornamental Panel Block
    level control panel
    function control panel
    side panel
    top panel
    bottom panel

Supply Side Reel Chassis

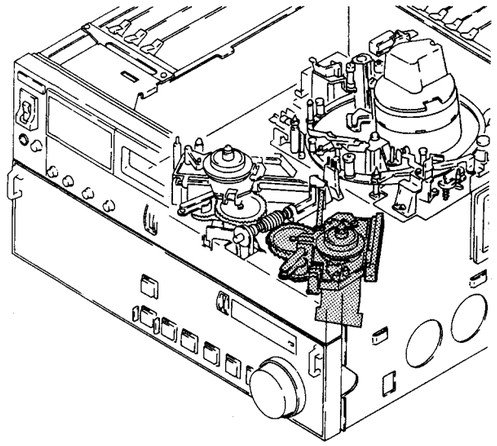


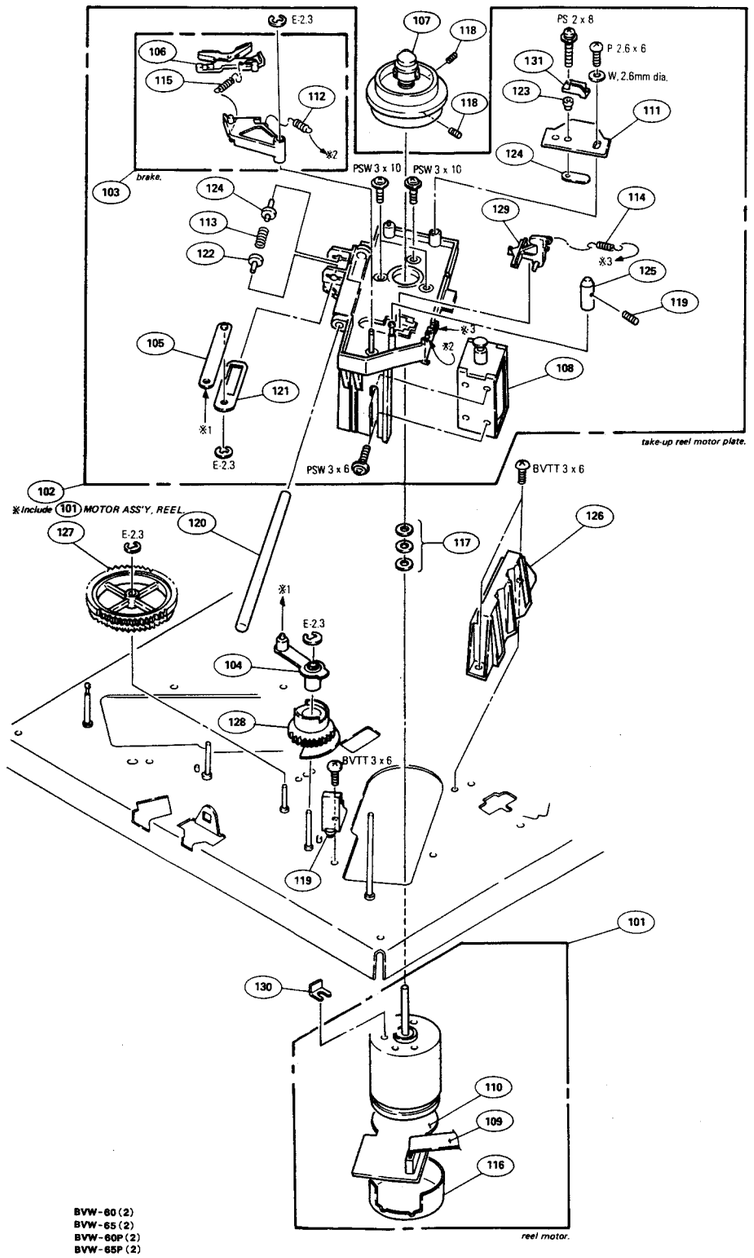
BVW-60(2)
BVW-65(2)
BVW-60P(2)
BVW-65P(2)

No.	Parts No.	SP	Description
1	A-6737-173-A	o	MOTOR ASS'Y, REEL DRIVING
2	A-6737-174-A	s	PLATE (S) ASS'Y, MOTOR
3	A-6737-175-A	s	MOTOR ASS'Y, REEL
4	A-6741-066-A	o	BRAKE ASS'Y
5	X-3717-201-1	o	PULLEY (L) ASS'Y, TIMING
6	X-3717-202-1	o	ARM ASS'Y, CRANK
7	X-3717-204-1	o	ARM (B) ASS'Y, CRANK
8	X-3717-205-1	s	LINING ASS'Y
9	X-3717-207-1	s	TABLE ASS'Y, REEL
10	1-454-417-31	s	SOLENOID, PLUNGER
11	1-559-266-11	o	WIRE, FLEXIBLE CARD
12	1-622-598-11	o	PRINTED CIRCUIT BOARD, PTC-20
13	1-622-599-11	o	PRINTED CIRCUIT BOARD, PTC-21
14	1-622-601-11	o	PRINTED CIRCUIT BOARD, PTC-36
15	1-622-605-11	o	PRINTED CIRCUIT BOARD, RM-40
16	1-622-606-11	o	PRINTED CIRCUIT BOARD, DE-15
17	3-307-381-01	s	SPRING, TENSION
18	3-491-247-00	s	SPRING, COMPRESSION
19	3-535-532-01	s	SPRING TENSION (6T)
20	3-554-202-00	o	SPRING, COMPRESSION
21	3-648-217-00	o	SPRING TENSION
22	3-659-324-00	s	SPRING, COMPRESSION
23	3-675-826-00	o	COVER, SHIELD, RM
24	3-701-441-01	s	WASHER, POLY 4MM DIA. 0.13T
	3-701-441-11	s	WASHER, POLY 4MM DIA. 0.25T
	3-701-441-21	s	WASHER, POLY 4MM DIA. 0.5T
25	3-701-506-01	s	SET SCREW, DOUBLE POINT 3 x 4
26	3-717-205-01	o	HOLDER (B), SHAFT
27	3-717-206-01	s	LEVER, M/C DETECTION
28	3-717-207-01	o	COVER, M/C DETECTION HOLDER
29	3-717-208-01	o	HOLDER (A), SHAFT
30	3-717-210-01	s	WORM
31	3-717-211-01	o	SHAFT, WORM
32	3-717-212-01	o	WASHER (B), WORM
33	3-717-213-01	o	WASHER (A), WORM
34	3-717-214-01	o	BEARING, WORM
35	3-717-219-01	o	BRACKET, MOTOR
36	3-717-220-01	o	PULLEY (S), TIMING
37	3-717-221-01	o	BRACKET, PTC-21
38	3-717-222-01	s	CAP (L), CS SHAFT
39	3-717-223-01	s	SHAFT, SLIDE
40	3-717-224-01	s	RETAINER, SHAFT, SLIDE
41	3-717-230-01	o	BRACKET, LIMITER
42	3-717-231-01	o	HOLDER, LIMITER
43	3-717-232-01	o	SHAFT, FITTING, MR SENSOR
44	3-717-233-01	o	BRACKET, DE-15
45	3-717-266-01	o	CAP (S), CG SHAFT
46	3-717-398-01	o	TABLE, SLIDE
47	3-717-399-01	s	WHEEL, W
48	3-717-400-01	s	GEAR, CRANK FLAT
49	3-717-426-01	s	HOLDER, M/C DETECTION
50	3-717-450-01	o	ARM, BRAKE RELEASE
51	3-717-542-01	s	BELT, TIMING
52	3-717-625-01	s	SPACER
53	8-835-179-01	s	MOTOR, DC MCB2B15

REEL CHASSIS (2)

Take-up Side Reel Chassis

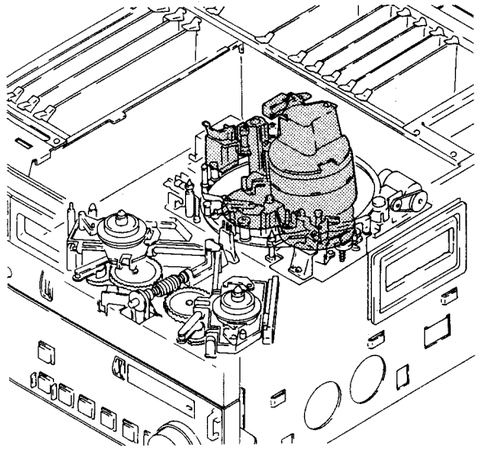


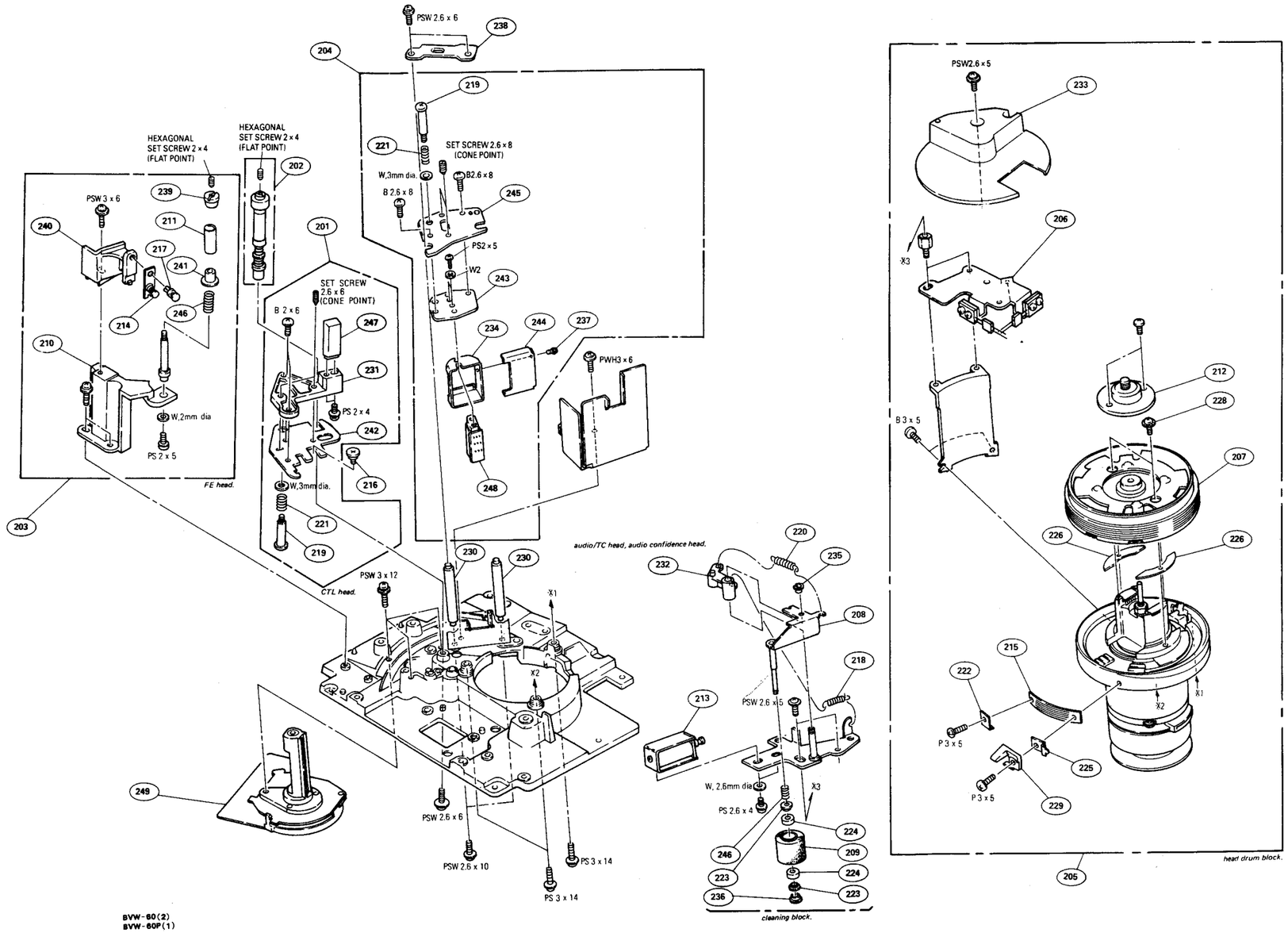


BVW-60 (2)
BVW-65 (2)
BVW-60P (2)
BVW-65P (2)

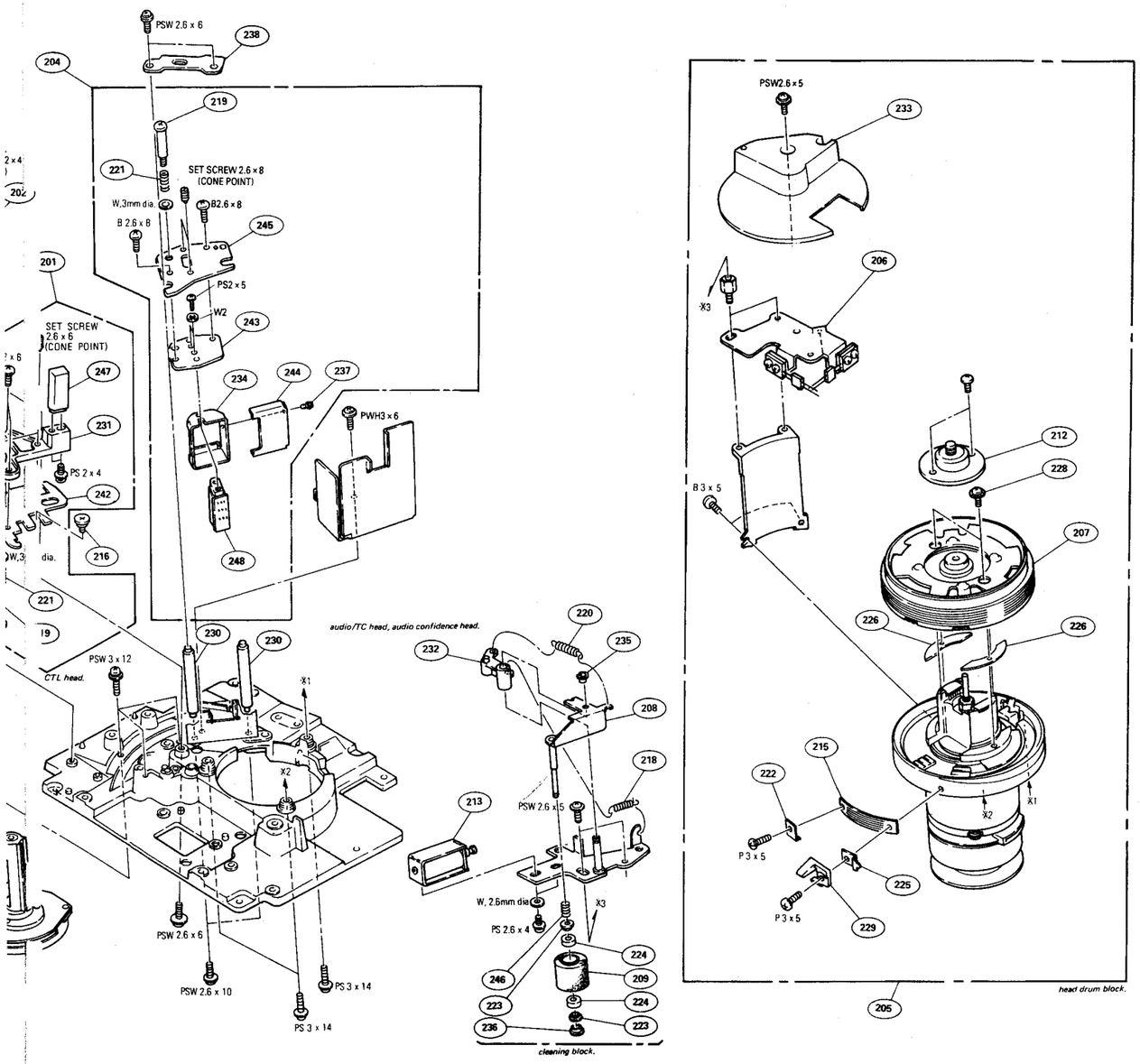
No.	Parts No.	SP	Description
101	A-6737-175-A	s	MOTOR ASS'Y, REEL
102	A-6737-176-A	s	PLATE (T) ASS'Y, MOTOR
103	A-6741-066-A	o	BRAKE ASS'Y
104	X-3717-202-1	o	ARM ASS'Y, CRANK
105	X-3717-204-1	o	ARM (B) ASS'Y, CRANK
106	X-3717-205-1	s	LINING ASS'Y
107	X-3717-207-1	s	TABLE ASS'Y, REEL
108	1-454-417-31	s	SOLENOID, PLUNGER
109	1-559-266-11	o	WIRE, FLEXIBLE CARD
110	1-622-605-11	o	PRINTED CIRCUIT BOARD, RM-40
111	1-622-606-11	o	PRINTED CIRCUIT BOARD, DE-15
112	3-307-381-01	s	SPRING, TENSION
113	3-491-247-00	s	SPRING, COMPRESSION
114	3-535-532-01	s	SPRING, TENSION
115	3-648-217-00	o	SPRING, TENSION
116	3-675-826-01	o	COVER, SHIELD, RM
117	3-701-441-01	s	WASHER. POLY 4MM DIA. 0.13T
	3-701-441-11	s	WASHER. POLY 4MM DIA. 0.25T
	3-701-441-21	s	WASHER. POLY 4MM DIA. 0.5T
118	3-701-506-01	s	SET SCREW, DOUBLE POINT 3 x 4
119	3-717-205-01	o	HOLDER (B), SHAFT
120	3-717-223-01	s	SHAFT, SLIDE
121	3-717-230-01	o	BRACKET, LIMITER
122	3-717-231-01	o	HOLDER, LIMITER
123	3-717-232-01	o	SHAFT, FITTING , MR SENSOR
124	3-717-233-01	o	BRACKET, DE-15
125	3-717-266-01	o	CAP (S), CC SHAFT
126	3-717-398-01	o	TABLE, SLIDE
127	3-717-399-01	s	WHEEL, W
128	3-717-400-01	s	GEAR, CRANK FLAT
129	3-717-450-01	o	ARM, BRAKE RELEASE
130	3-717-625-01	s	SPACER
131	1-807-683-11	s	RESISTOR ELEMENT

Head Drum, Stationary Heads and Tape Guides Block



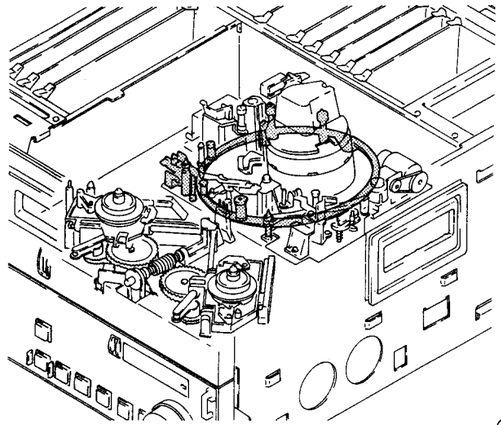


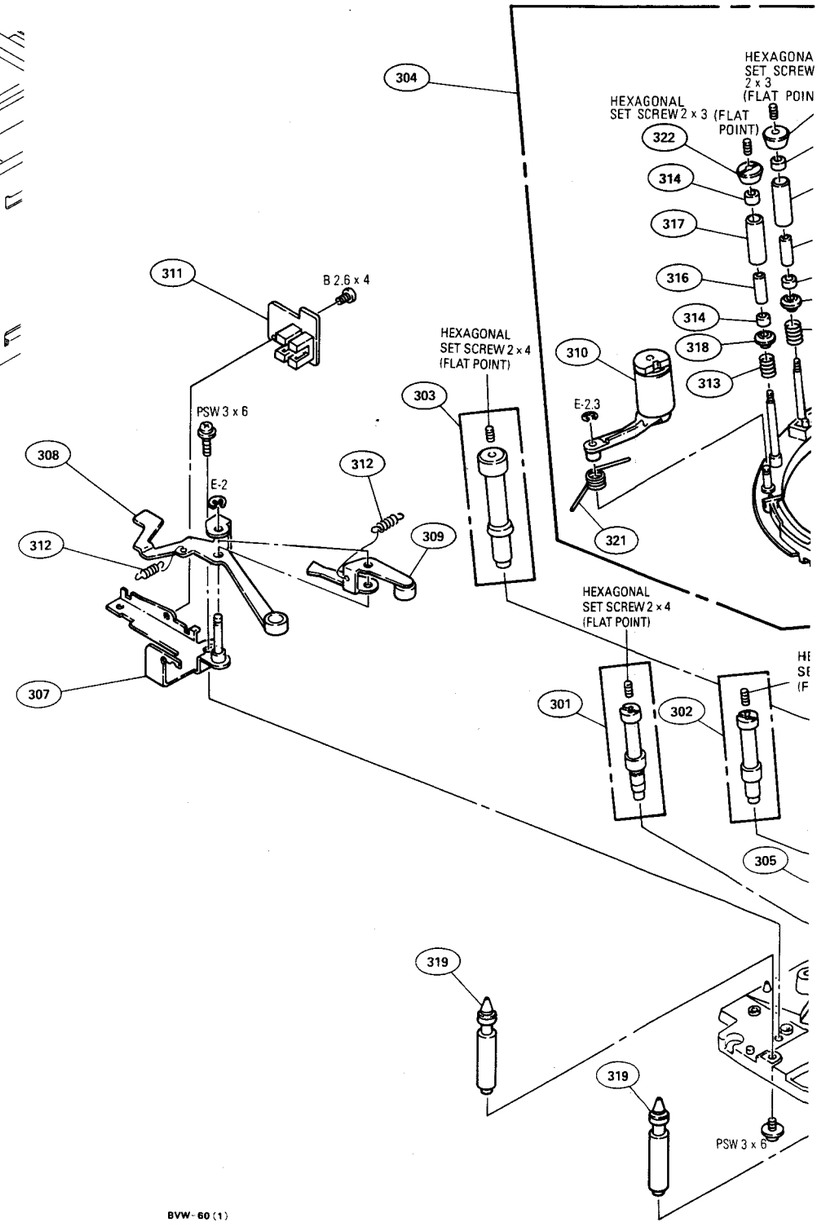
BVW-60(2)
BVW-60P(1)



No.	Parts No.	SP	Description
201	A-6736-061-A	o	HEAD ASS'Y CTL
202	A-6746-027-A	s	ROLLER (TG 1N) ASS'Y, TAPE
203	A-6746-053-A	o	TG-0 ASS'Y
204	A-6736-075-A	o	HEAD ASS'Y, AU
205	A-6050-554-A	s	HEAD DRUM ASS'Y, DBH-10A-R
206	A-6050-656-A	s	BRUSH ASS'Y
207	A-6762-351-A	s	UPPER DRUM ASS'Y, DBR-10-R
208	X-3675-854-1	o	LEVER ASS'Y, C
209	X-3675-858-1	s	ROLLER SUB ASS'Y, C
210	X-3717-292-1	o	DECK ASS'Y, TG-0
211	X-3717-299-1	s	ROLLER ASS'Y, GUIDE
212	A-6050-658-A	s	RING ASS'Y, SLIP
213	1-454-372-11	s	SOLENOID, PLUNGER
214	1-543-316-21	s	HEAD, SENSING (SMALL TYPE)
215	1-586-633-00	s	DETECTOR, DEW
216	2-236-956-00	s	SCREW, STEP
217	2-279-715-01	s	RIVET, NYLON
218	3-140-263-XX	s	SPRING, TENSION (23T)
219	3-437-173-02	o	SCREW, HEAD ADJUSTING
220	3-542-475-00	s	SPRING, TENSION
221	3-653-350-00	s	SPRING, COMPRESSION
222	3-655-631-00	o	TERMINAL, GROUND
223	3-655-966-00	s	SPACER, STEP
224	3-669-443-00	s	BEARING, BALL (NO FLANGE)
225	3-675-701-00	o	TERMINAL BOARD
226	3-675-708-01	s	SPACER, FLANGE (T=0.01 MM)
	3-675-708-21	s	SPACER, FLANGE (T=0.5 MM)
	3-675-708-31	s	SPACER, FLANGE (T=0.1 MM)
228	3-675-740-00	o	EXT TOOTH (W) (MIDDLE), 2.6X8
229	3-675-739-00	o	SPACER, INSULATING (2)
230	3-675-804-02	o	BRACKET, ADJUSTMENT PLATE
231	3-675-842-00	o	PLATE, ADJUSTMENT, CTL
232	3-680-839-01	o	LEVER (2), C
233	3-717-199-01	o	COVER, BRUSH
234	3-698-731-01	o	PLATE, SHIELD, FRONT
235	3-703-074-00	s	CAP 3, SHAFT
236	3-703-075-00	s	CAP 2, SHAFT
237	3-703-502-41	s	SCREW
238	3-717-243-03	o	PLATE, ADJUSTMENT, AT HEAD
239	3-717-267-01	s	FLANGE, UPPER
240	3-717-272-01	o	HOLDER, S SENSOR
241	3-717-293-01	s	FLANGE, LOWER
242	3-717-522-01	o	BASE, CTL HEAD
243	3-717-650-02	o	BRACKET (P), HEAD
244	3-717-651-01	o	CASE (P), SHIELD
245	3-717-652-02	o	DECK (P), HEAD
246	4-879-762-00	s	SPRING, COMPRESSION
247	8-825-554-73	s	HEAD, CTL PS244-21A
248	8-825-771-11	s	HEAD AUDIO CONFI. PS244-2103C
249	8-835-259-01	s	MOTOR, DC BHF-1918A

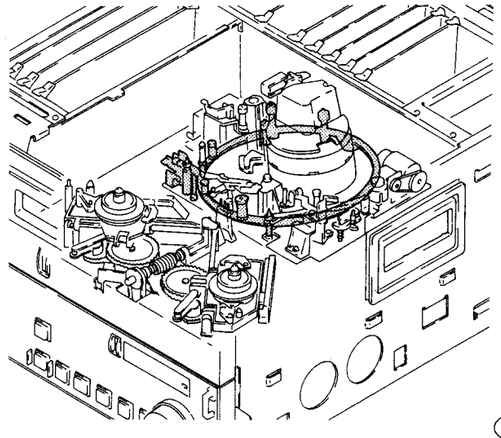
Threading Ring Block

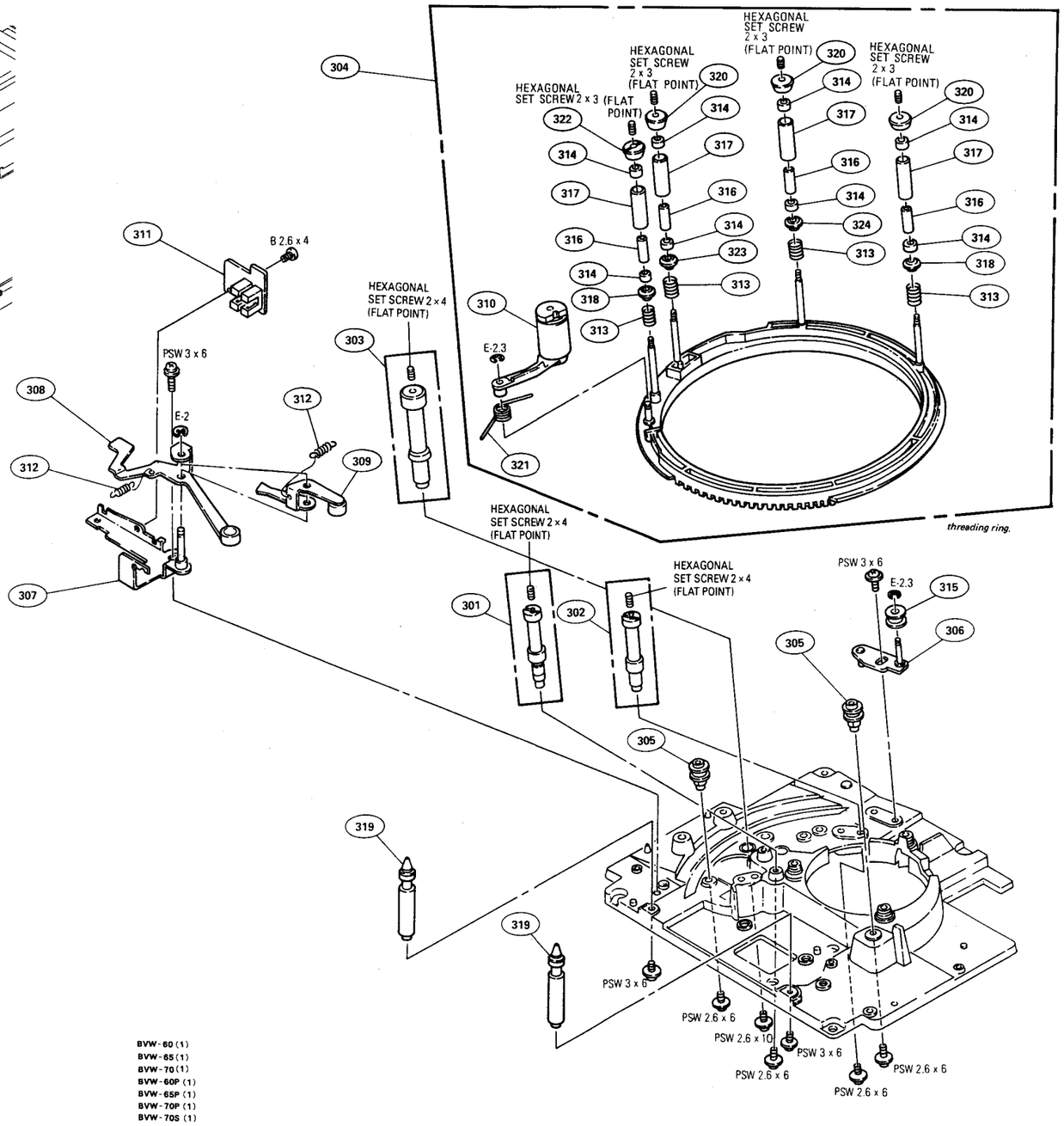




BVW-60 (1)
BVW-65 (1)
BVW-70 (1)
BVW-60P (1)
BVW-65P (1)
BVW-70P (1)
BVW-70S (1)

Threading Ring Block

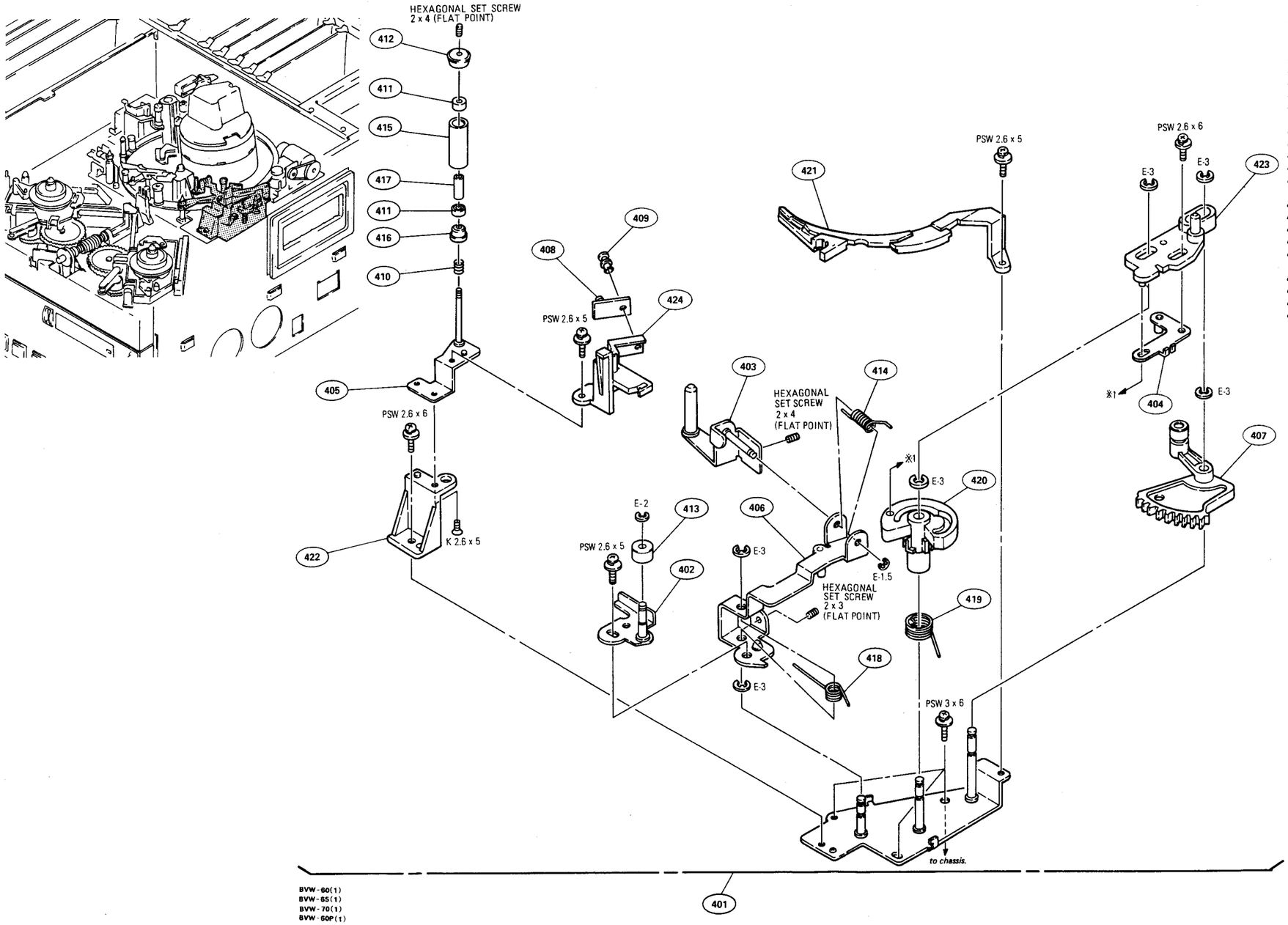




BVW-60 (1)
BVW-65 (1)
BVW-70 (1)
BVW-60P (1)
BVW-65P (1)
BVW-70P (1)
BVW-70S (1)

No.	Parts No.	SP	Description
301	A-6746-028-A	s	ROLLER (TG2) ASS'Y, TAPE
302	A-6746-029-C	s	ROLLER (TG3) ASS'Y, TAPE
303	A-6746-030-C	s	ROLLER (TG4) ASS'Y, TAPE
304	A-6750-214-A	o	RING ASS'Y, LOADING
305	X-3675-809-0	o	ROLLER (A) ASS'Y, RING
306	X-3717-208-1	o	ROLLER (B) SUB ASS'Y, RING
307	X-3717-210-1	o	BRACKET ASS'Y, RING SENSOR
308	X-3717-211-1	o	LEVER ASS'Y, TH END
309	X-3717-212-1	o	LEVER ASS'Y, TH.B END
310	X-3717-215-1	s	ARM ASS'Y, PINCH ROLLER
311	1-622-597-11	o	PRINTED CIRCUIT BOARD, PTC-15
312	3-533-373-00	s	SPRING, TENSION
313	3-637-331-00	s	SPRING, COMPRESSION (L)
314	3-650-312-00	s	BEARING, BALL (NO FLANGE)
315	3-675-866-00	o	ROLLER, RING
316	3-680-809-00	s	RETAINER, BEARING
317	3-680-810-00	s	ROLLER
318	3-680-812-00	s	FLANGE, LOWER
319	3-717-242-01	o	SHAFT, CG
320	3-717-267-01	s	FLANGE, UPPER
321	3-717-268-01	s	SPRING
322	3-717-269-01	s	FLANGE, PRECEDING GUIDE
323	3-717-270-01	s	FLANGE (A), LOWER
324	3-717-271-01	s	FLANGE (B), LOWER

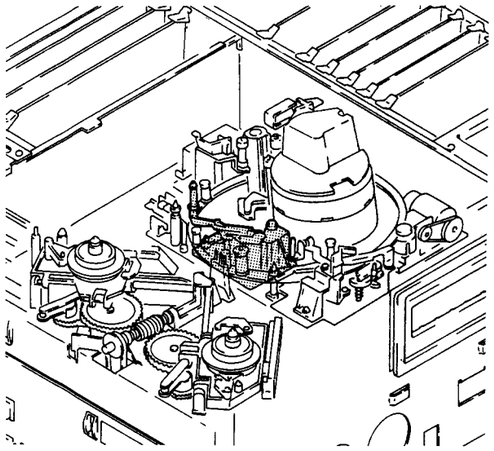
T Drawer Arm Block

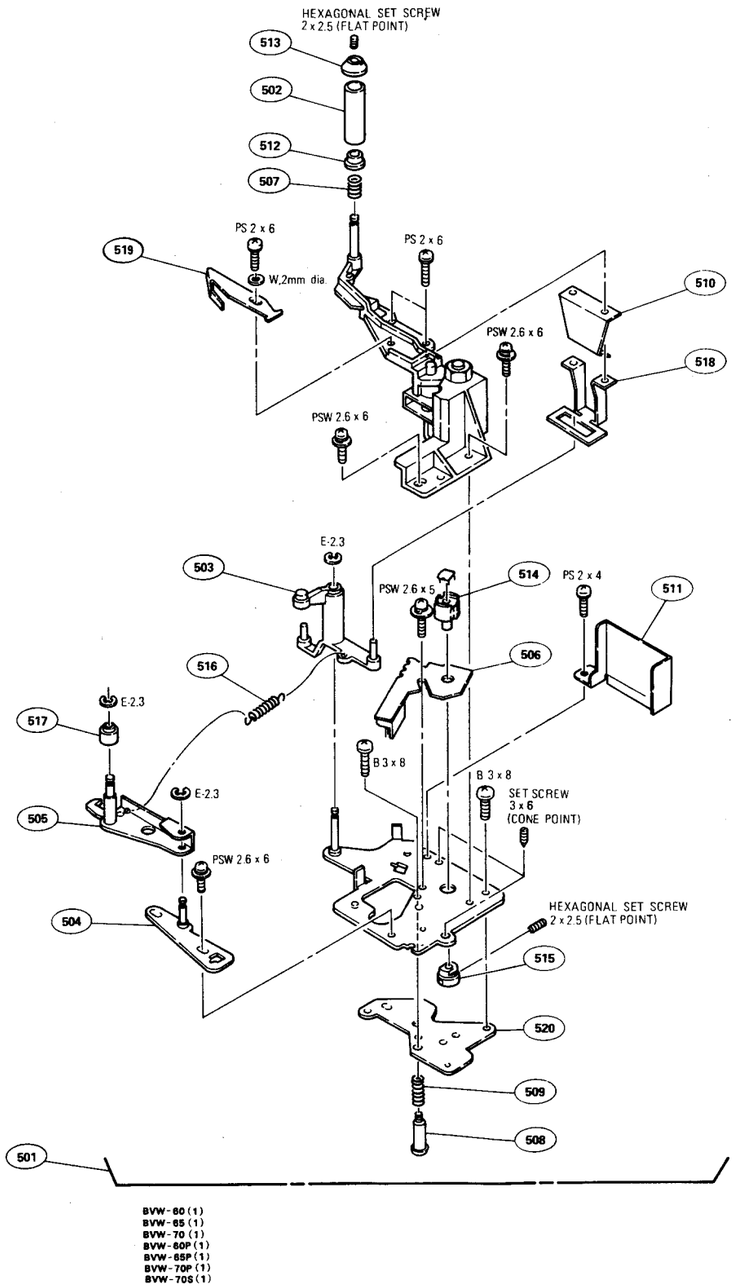


No.	Parts No.	SP	Description
401	A-6746-047-D	s	DRAWER ASS'Y, T
402	X-3717-221-1	o	PLATE ASS'Y, ADJUSTMENT
403	X-3717-222-1	s	GUIDE ASS'Y, SLANT
404	X-3717-223-1	o	PLATE ASS'Y, ADJUSTMENT, SLANT
405	X-3717-224-1	o	BASE ASS'Y, T ROLLER
406	X-3717-239-1	o	ARM ASS'Y, T
407	X-3717-250-2	o	GEAR (1) ASS'Y, T
408	1-543-316-21	s	HEAD, SENSING (SMALL TYPE)
409	2-279-715-01	s	RIVET, NYLON
410	2-618-901-00	o	SPRING
411	3-650-312-00	s	BEARING, BALL (NO FLANGE)
412	3-717-267-01	s	FLANGE, UPPER
413	3-717-283-01	o	ROLLER (2)
414	3-717-284-01	o	SPRING (SLANT GUIDE)
415	3-717-292-01	s	ROLLER, GUIDE
416	3-717-293-01	s	FLANGE, LOWER
417	3-717-294-01	o	RETAINER, BEARING
418	3-717-299-01	o	SPRING
419	3-717-300-01	o	SPRING (T GEAR 2)
420	3-717-406-01	o	GEAR (2), T
421	3-717-407-01	s	RETAINER, PINCH
422	3-717-524-01	o	BRACKET, T ROLLER ASS'Y
423	3-717-536-01	o	SLIDER
424	3-717-537-01	o	HOLDER, SENSOR

BVW-60(1)
BVW-65(1)
BVW-70(1)
BVW-60P(1)
BVW-65P(1)
BVW-70P(1)
BVW-70S(1)

Supply Tension Regulator Block

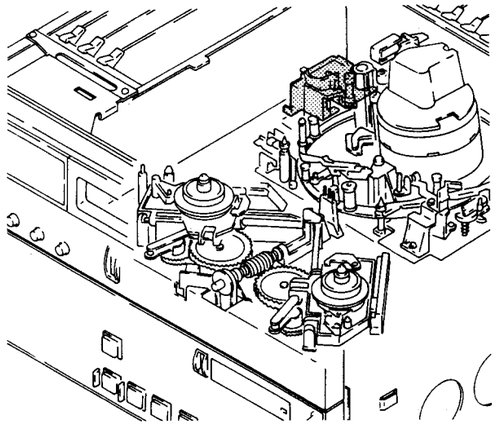


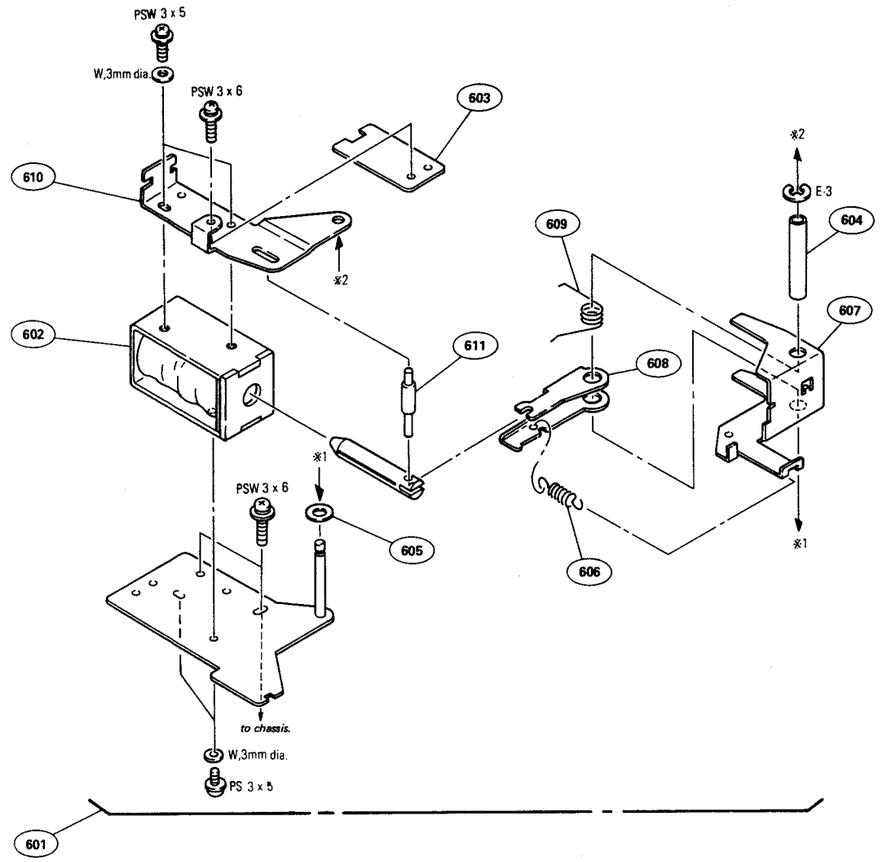


BVW-60 (1)
BVW-65 (1)
BVW-70 (1)
BVW-60P (1)
BVW-65P (1)
BVW-70P (1)
BVW-70S (1)

No.	Parts No.	SP	Description
501	A-6742-061-A	s	ARM ASS'Y, S TENSION
502	X-3675-851-0	s	ROLLER ASS'Y, TR
503	X-3717-218-1	o	ARM ASS'Y, RETURN
504	X-3717-219-1	o	HOOK ASS'Y, TENSION REGULATOR
505	X-3717-220-1	o	ARM ASS'Y, TENSION REGULATOR
506	1-611-279-13	o	PRINTED CIRCUIT BOARD, TR-18
507	2-618-901-00	o	SPRING
508	3-437-173-02	o	SCREW, HEAD ADJUSTING
509	3-653-350-00	s	SPRING, COMPRESSION
510	3-675-872-00	o	SPRING, LEAF
511	3-675-885-02	o	PLATE, SHIELD, T-DME
512	3-677-749-03	s	RETAINER, B
513	3-677-752-00	s	NUT, ADJUSTMENT, T
514	3-680-830-01	s	HOLDER, DME
515	3-680-831-00	o	COLLAR, DME
516	3-680-860-01	s	SPRING, TENSION (POWER TENSION)
517	3-717-253-01	s	ROLLER
518	3-717-276-01	o	PROTECTOR
519	3-717-277-01	o	PLATE, ADJUSTMENT, RETURN
520	3-717-278-01	o	BRACKET, TR

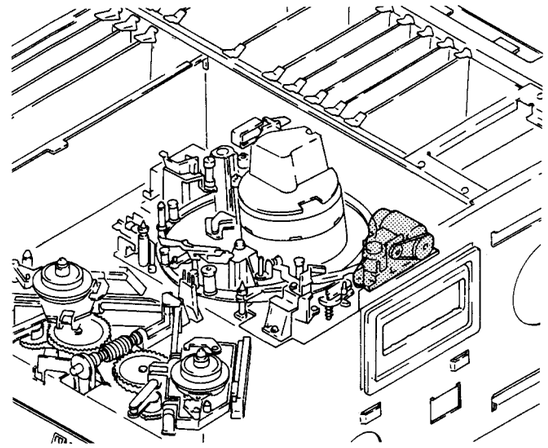
Pinch Press Mechanism Block



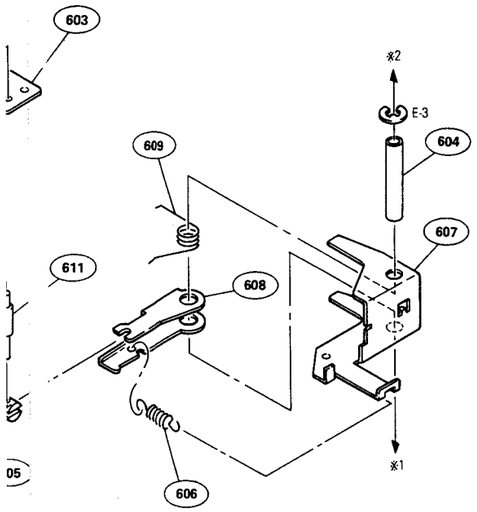


BVW-60 (1)
BVW-65 (1)
BVW-70 (1)
BVW-60P (1)
BVW-65P (1)
BVW-70P (1)
BVW-70S (1)

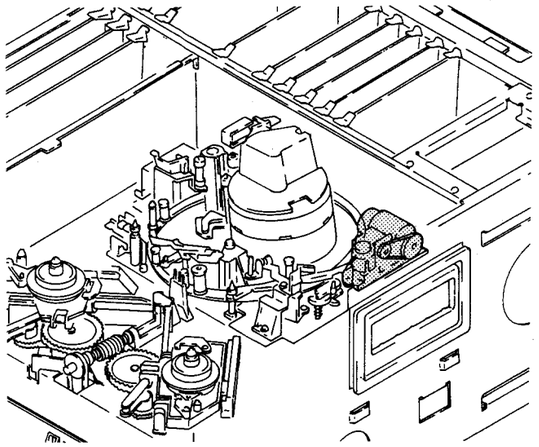
Gear Box Block

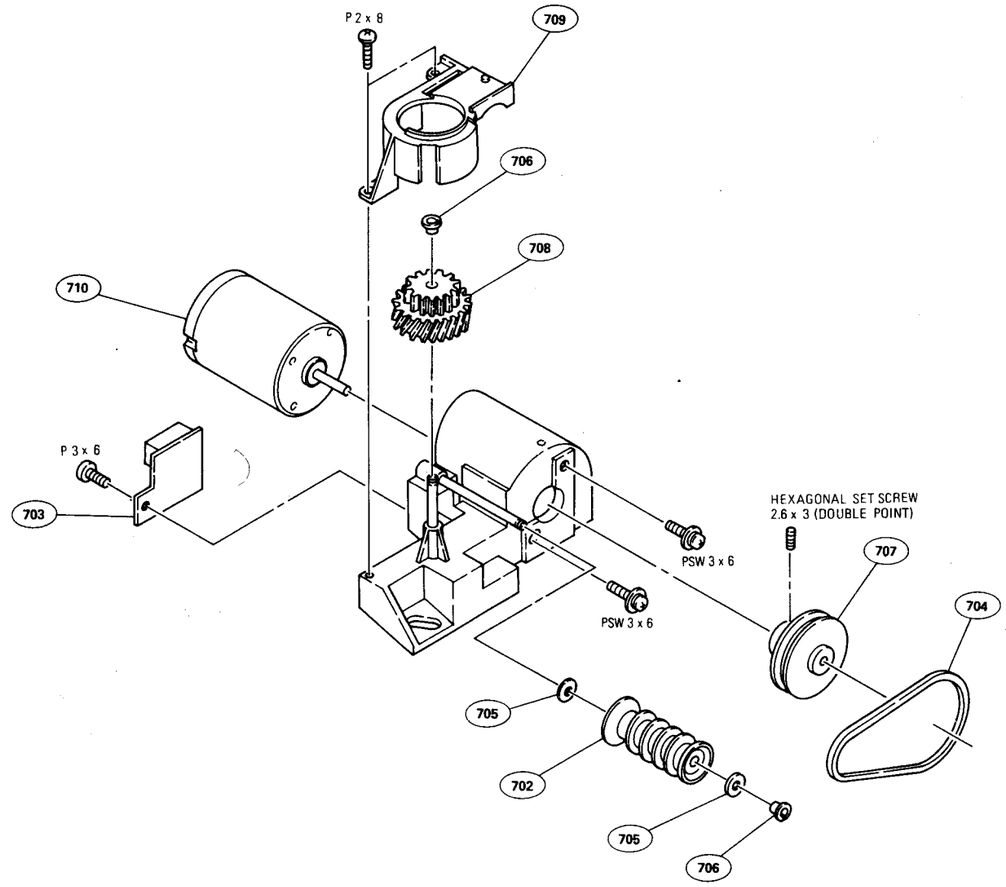


No.	Parts No.	SP	Description
601	A-6749-117-A	o	PRESS ASS'Y, PINCH
602	1-454-338-00	s	SOLENOID, PLUGER
603	1-622-596-11	o	PRINTED CIRCUIT BOARD, PD-35
604	3-653-382-01	o	SPACER (4 x 25)
605	3-701-441-21	s	WASHER POLY, 4MM DIA. 0.5T
606	3-537-674-03	s	SPRING, TENSION
607	3-717-246-01	o	LEVER, PRESS, P
608	3-717-247-01	o	LIMITER, P
609	3-717-248-01	o	SPRING
610	3-717-249-01	o	STOPPER, P
611	3-717-250-01	o	SHAFT, JOINT, P



Gear Box Block



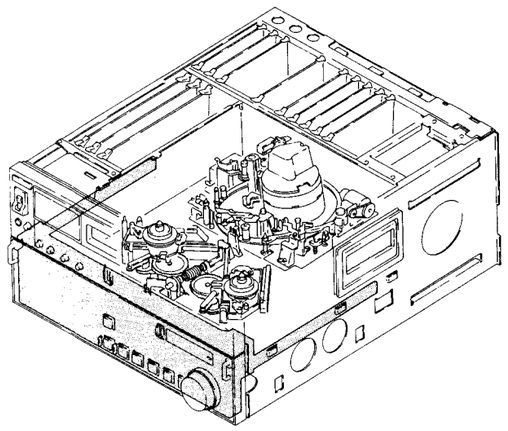


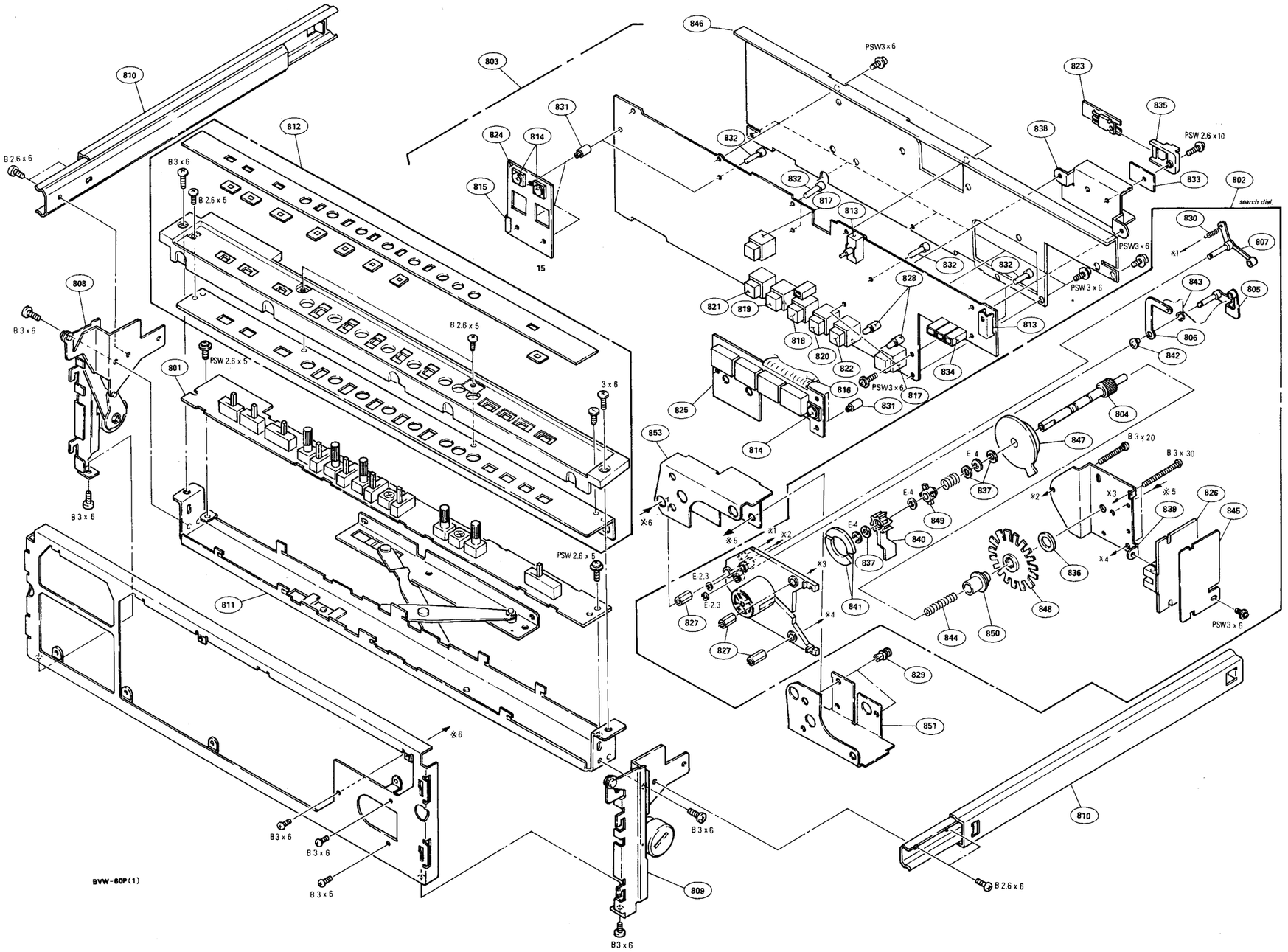
701

BVW-60(1) BVW-70P(1)
BVW-65(1) BVW-70S(1)
BVW-70(1)
BVW-60P(1)
BVW-65P(1)

No.	Parts No.	SP	Description
701	A-6750-213-E	s	BOX ASS'Y, GEAR
702	X-3717-214-2	s	WORM ASS'Y
703	1-622-607-11	o	PRINTED CIRCUIT BOARD, PTC-31
704	3-688-066-01	s	BELT, LM
705	3-701-439-21	s	WASHER POLY 3MM DIA. 0.5T
706	3-703-074-00	s	CAP 3, SHAFT
707	3-717-261-02	o	PULLEY, MOTOR
708	3-717-262-02	s	GEAR, DRIVE
709	3-717-550-02	o	COVER, GEAR BOX
710	8-835-179-01	s	MOTOR, DC MCB2B15

Function Control Chassis Block





No.	Part
801	A-67
802	A-67
803	A-67
804	X-37
805	X-37
806	X-37
807	X-37
808	X-37
809	X-37
810	X-37
811	X-37
812	X-37
813	1-51
814	1-55
815	1-53
816	1-53
817	1-57
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819	1-57
820	1-57
821	1-57
822	1-57
823	1-60
824	1-62
825	1-62
826	1-62
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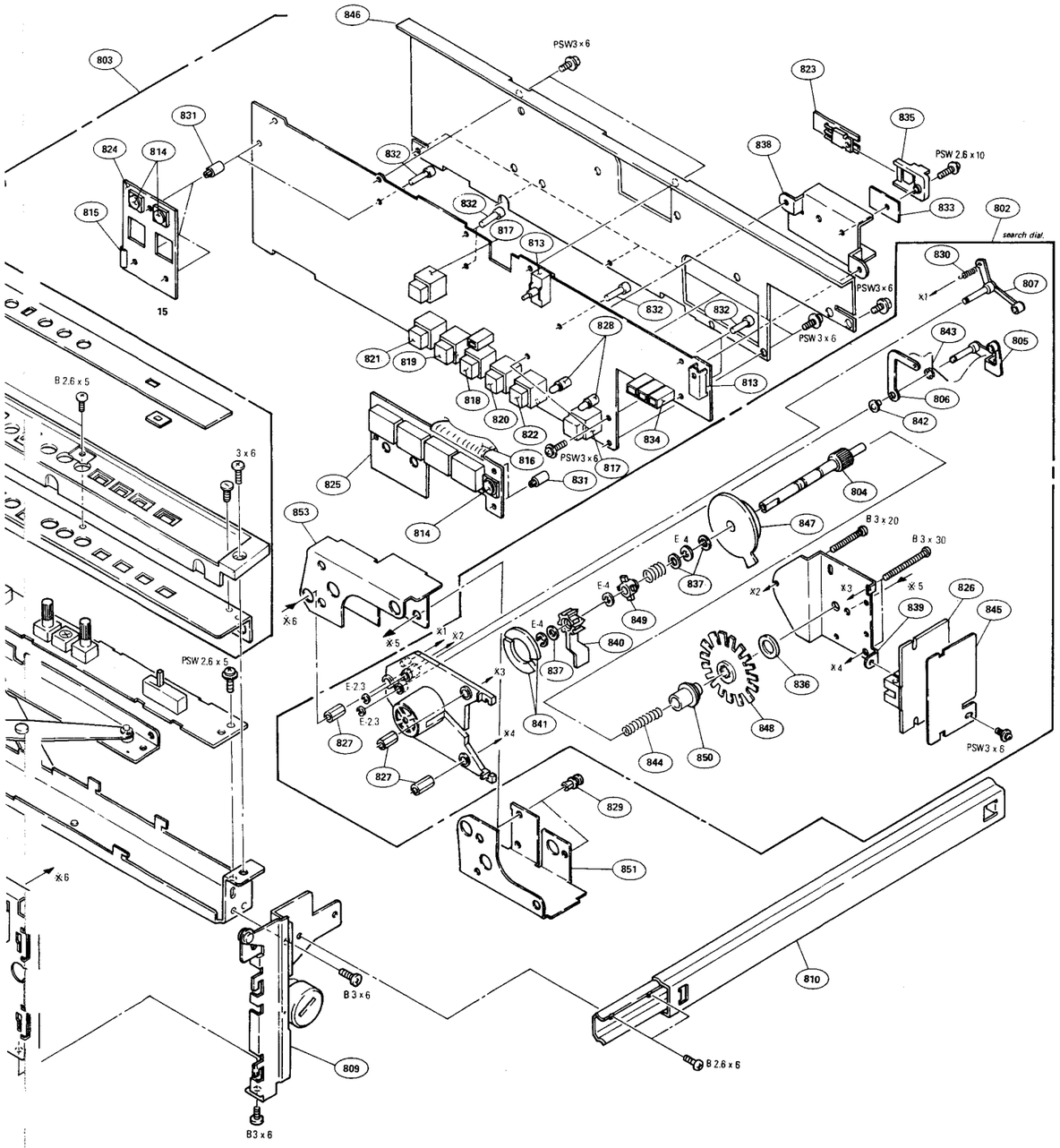
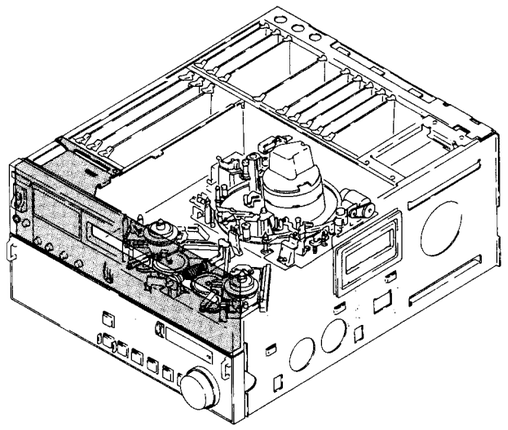
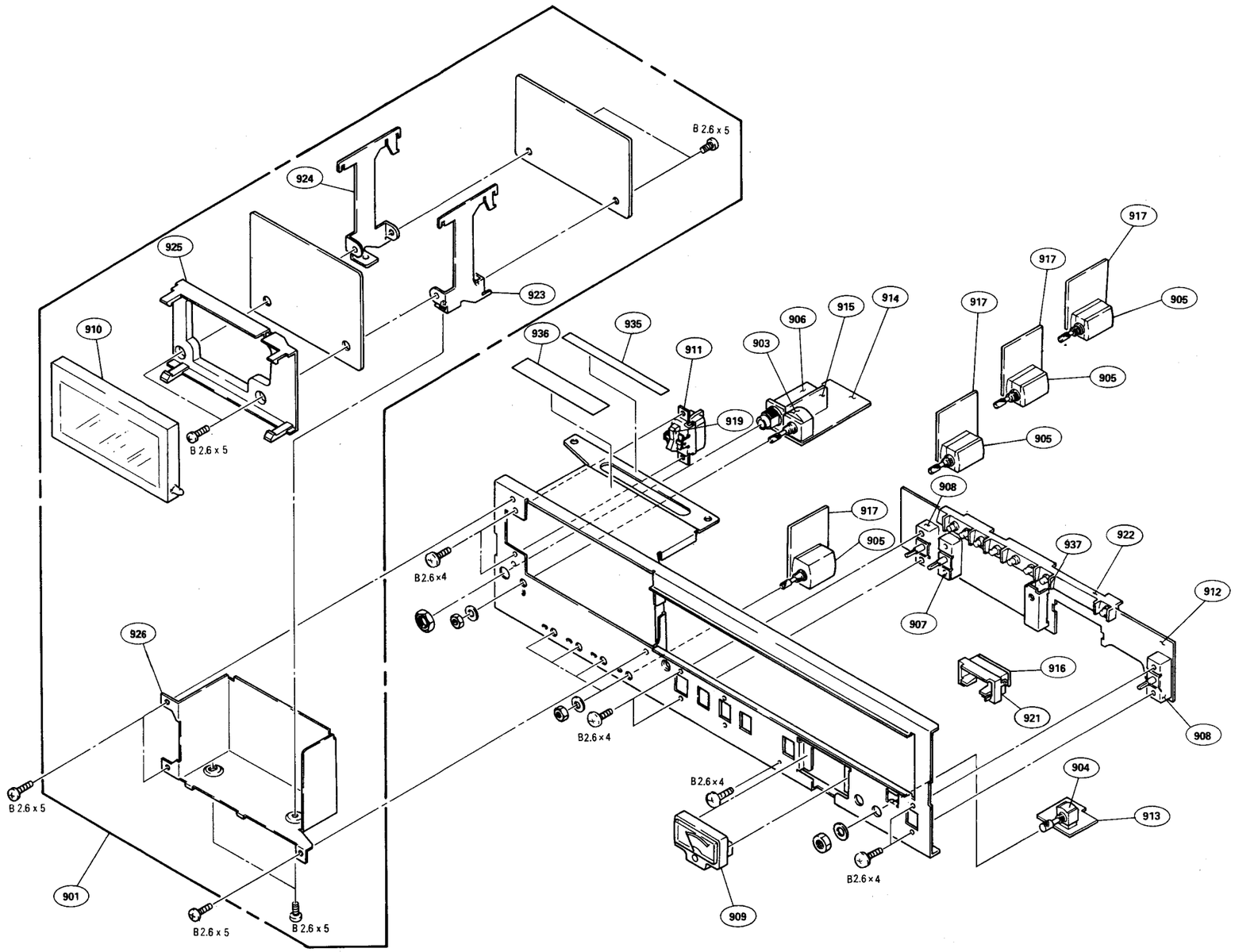


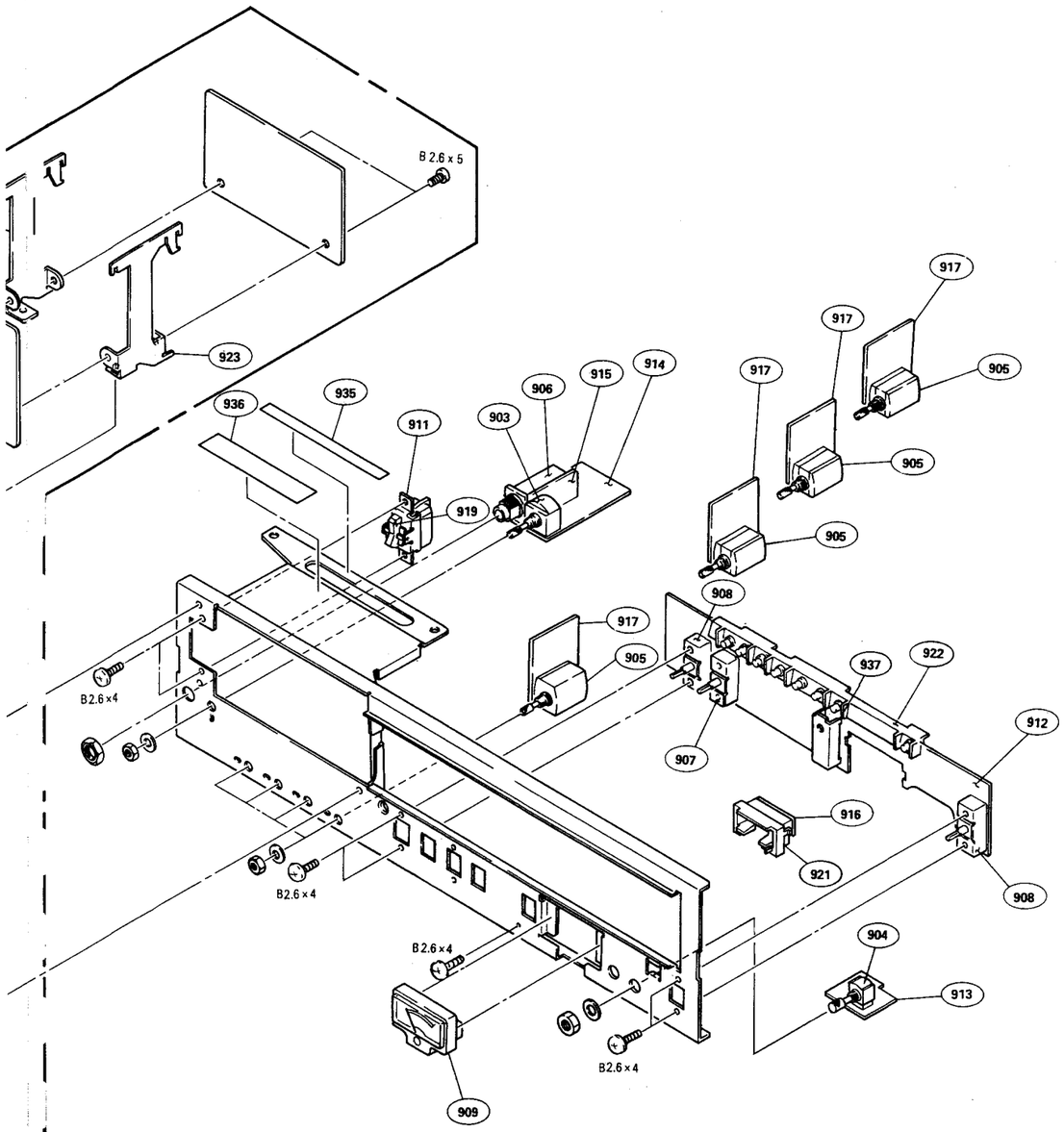
No.	Parts NO.	SP	Description
801	A-6717-486-A	o	MOUNTED CIRCUIT BOARD, CP-103AP
802	A-6734-238-C	o	DIAL BLOCK ASS'Y, SEARCH
803	A-6734-245-A	o	CHASSIS ASS'Y, KEY
804	X-3717-226-1	o	SHAFT SUB ASS'Y, MAIN
805	X-3717-227-1	o	ARM (RIGHT) ASS'Y, S10
806	X-3717-228-1	o	ARM (LEFT) ASS'Y, S10
807	X-3717-229-1	o	ARM ASS'Y, RETURN
808	X-3717-251-0	o	SLIDER (LELT) ASS'Y
809	X-3717-252-1	o	SLIDER (RIGHT) ASS'Y
810	X-3717-253-1	o	RAIL ASS'Y, SLIDE
811	X-3717-254-1	o	CHASSIS SUB ASS'Y, SUB
812	X-3717-302-1	o	SUB PANEL (P) ASS'Y
813	1-516-995-00	s	SWITCH, LEVER SLIDE
814	1-552-539-00	s	SWITCH, KEY BOARD
815	1-535-698-11	o	WIRE, JUMPER
816	1-535-699-11	o	WIRE, JUMPER
817	1-571-167-11	s	SWITCH, TACTIL
818	1-571-167-21	s	SWITCH, TACTIL
819	1-571-167-31	s	SWITCH, TACTIL
820	1-571-167-41	s	SWITCH, TACTIL
821	1-571-169-11	s	SWITCH, TACTIL
822	1-571-169-21	s	SWITCH, TACTIL
823	1-605-018-00	o	PRINTED CIRCUIT BOARD, PT-9
824	1-622-554-11	o	PRINTED CIRCUIT BOARD, KY-107
825	1-622-556-11	o	PRINTED CIRCUIT BOARD, DP-71
826	1-622-638-11	o	PRINTED CITCUIT BOARD, PTC-32
827	2-280-622-11	o	SUPPORT (M3), HEXAGON
828	3-305-651-11	s	RETAINER, LED
829	3-531-576-01	s	RIVET, NYLON
830	3-639-371-00	s	SPRING, TENSION
831	3-659-487-00	s	HOLDER, BUZER
832	3-659-488-00	s	PIN, BUZER HOLDER
833	3-660-978-00	s	SHEET, HEAT RESISTING
834	3-668-124-00	o	HOLDER, LED
835	3-669-904-00	o	HOLDER, PT
836	3-662-048-00	s	WASHER, BRACKET
837	3-701-443-21	s	WASHER POLY 5MM DIA. 0.5T
838	3-717-309-01	o	BRACKET, PT
839	3-717-315-01	o	PLATE, BOTTOM, SD
840	3-717-316-03	o	GUIDE, LOCK IN
841	3-717-317-01	o	PLATE, CLUTCH
842	3-717-318-01	o	BEARING, S10
843	3-717-319-01	o	SPRING, TORSION
844	3-717-320-01	o	SPRING, COMPRESSION
845	3-717-321-01	o	PROTECTOR, PTC
846	3-717-416-01	o	PROTECTOR, KY
847	3-717-417-01	o	CAM
848	3-717-418-01	o	PLATE
849	3-717-546-02	o	GUIDE, LOCK OUT
850	3-717-553-01	o	BEARING, SD
851	3-717-587-02	o	COVER (W), SD
852	3-717-672-01	o	STOPPER, KY
853	3-718-771-01	o	COVER (U), SD

Level Control Chassis Block



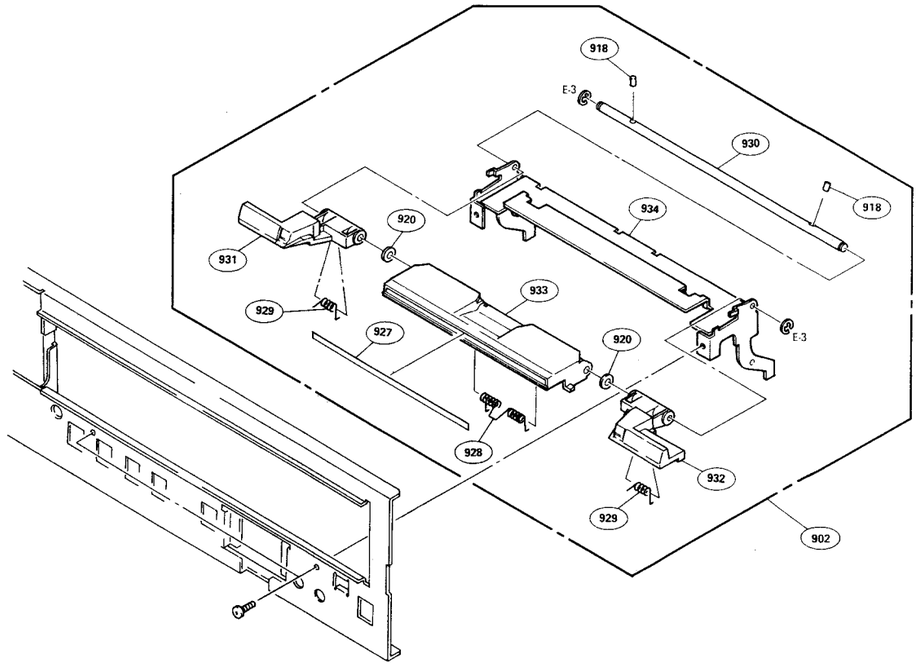


BVW-60 (2)
BVW-60P (1)



No.	Parts No.	SP	Description
901	A-6730-924-A	o	TUBE ASS'Y, INDICATION
902	A-6751-377-A	o	GUIDE ASS'Y, SC
903	1-230-501-11	s	RES, VAR, CARBON 20K/20K
904	1-237-719-11	s	VAR, CARBON 100K
905	1-237-781-11	s	VAR, CARBON (WITH SW) 10K
906	1-507-863-31	s	JACK, LARGE TYPE
907	1-516-994-00	s	SWITCH, LEVER SLIDE
908	1-516-995-00	s	SWITCH, LEVER SLIDE
909	1-520-494-21	s	METER, LEVEL (RF)
910	1-520-496-11	s	LEVEL METER, AUDIO
⚠911	1-570-117-11	s	SWITCH, LOCKER (AC POWER)
912	1-622-573-13	o	PRINTED CIRCUIT BOARD, SW-144
913	1-622-588-11	o	PRINTED CIRCUIT BOARD, VR-61
914	1-622-589-11	o	PRINTED CIRCUIT BOARD, VR-62
915	1-622-590-13	o	PRINTED CIRCUIT BOARD, HP-33
916	1-622-591-11	o	PRINTED CIRCUIT BOARD, DP-72
917	1-622-592-11	o	PRINTED CIRCUIT BOARD, VR-42
918	3-677-193-01	o	PIN, STOPPER
919	3-688-814-01	s	CAP, SWITCH
920	3-701-441-21	s	WASHER POLY 4MM DIA. 0.5T

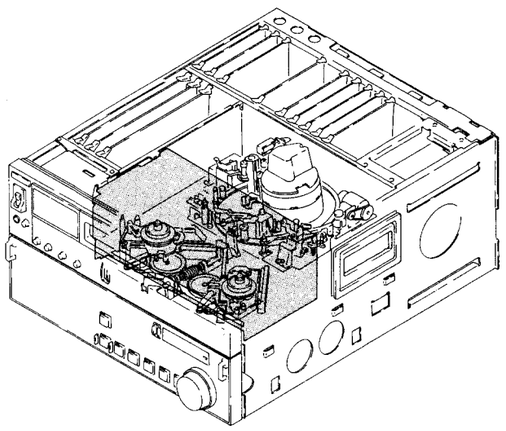
No.	Parts No.	SP	Description
921	3-717-323-01	o	COVER, METER LED
922	3-717-474-02	o	HOLDER, LED
923	3-717-531-01	o	BRACKET (RIGHT), DP
924	3-717-532-01	o	BRACKET (LEFT), DP
925	3-717-538-01	o	HOLDER, VFD
926	3-717-539-01	o	CASE, INDICATION TUBE
927	3-717-614-01	o	LABEL, C-LOCK OUT
928	3-717-615-01	o	SPRING, C-LOCK OUT
929	3-717-616-01	o	SPRING, SC GUIDE
930	3-717-617-01	o	SHAFT, SC GUIDE
931	3-717-618-01	o	GUIDE L, SC
932	3-717-619-01	o	GUIDE R, SC
933	3-717-620-01	o	PLATE, C-LOCK OUT
934	3-717-621-01	o	BRACKET, SC GUIDE
935	3-717-647-01	o	LABEL (M), PC BOARD (for S/N up to 10712)
	3-727-093-01	o	LABEL (M), PC BOARD (for S/N 10713 and higher)
936	3-717-649-01	o	LABEL (BF), PC BOARD
937	3-717-672-01	o	STOPPER, KY

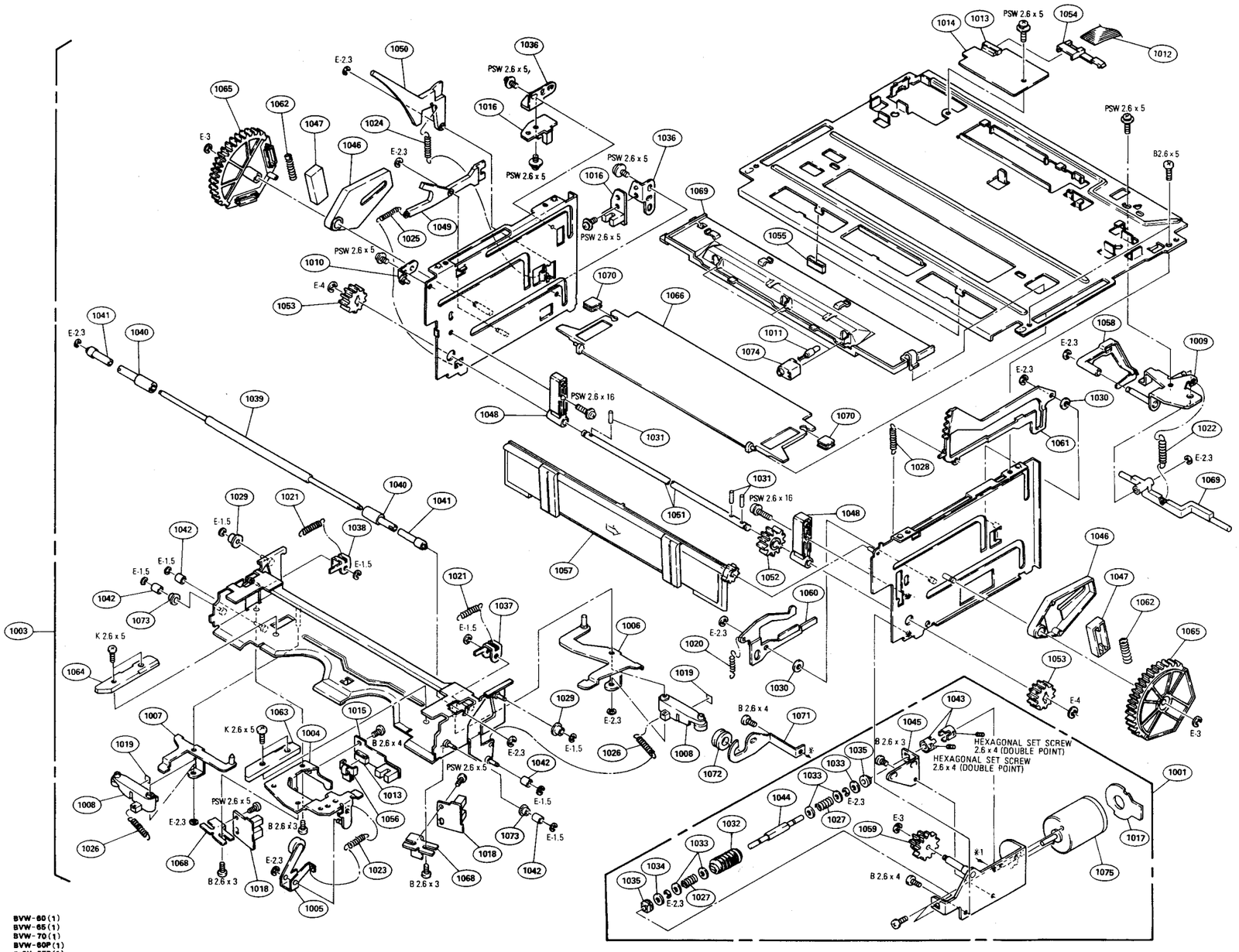


BVW-60 (1)
BVW-60P (1)

Cassette-up Compartment

S/N up to 10170





BVW-60(1)
BVW-65(1)
BVW-70(1)
BVW-60P(1)
BVW-65P(1)
BVW-70P(1)

No.	Part
1001	A-67
1003	A-67
1004	X-37
1005	X-37
1006	X-37
1007	X-37
1008	X-37
1009	X-37
1010	X-37
1011	1-51
1012	1-55
1013	1-56
1014	1-62
1015	1-62
1016	1-62
1017	1-62
1018	1-62
1019	3-32
1020	3-43
1021	3-48
1022	3-49
1023	3-50
1024	3-14
1025	3-53
1026	3-57
1027	3-65
1028	3-66
1029	3-67
1030	3-70
1031	3-70
1032	3-71
1033	3-71
1034	3-71
1035	3-71
1036	3-71
1037	3-71
1038	3-71
1039	3-71
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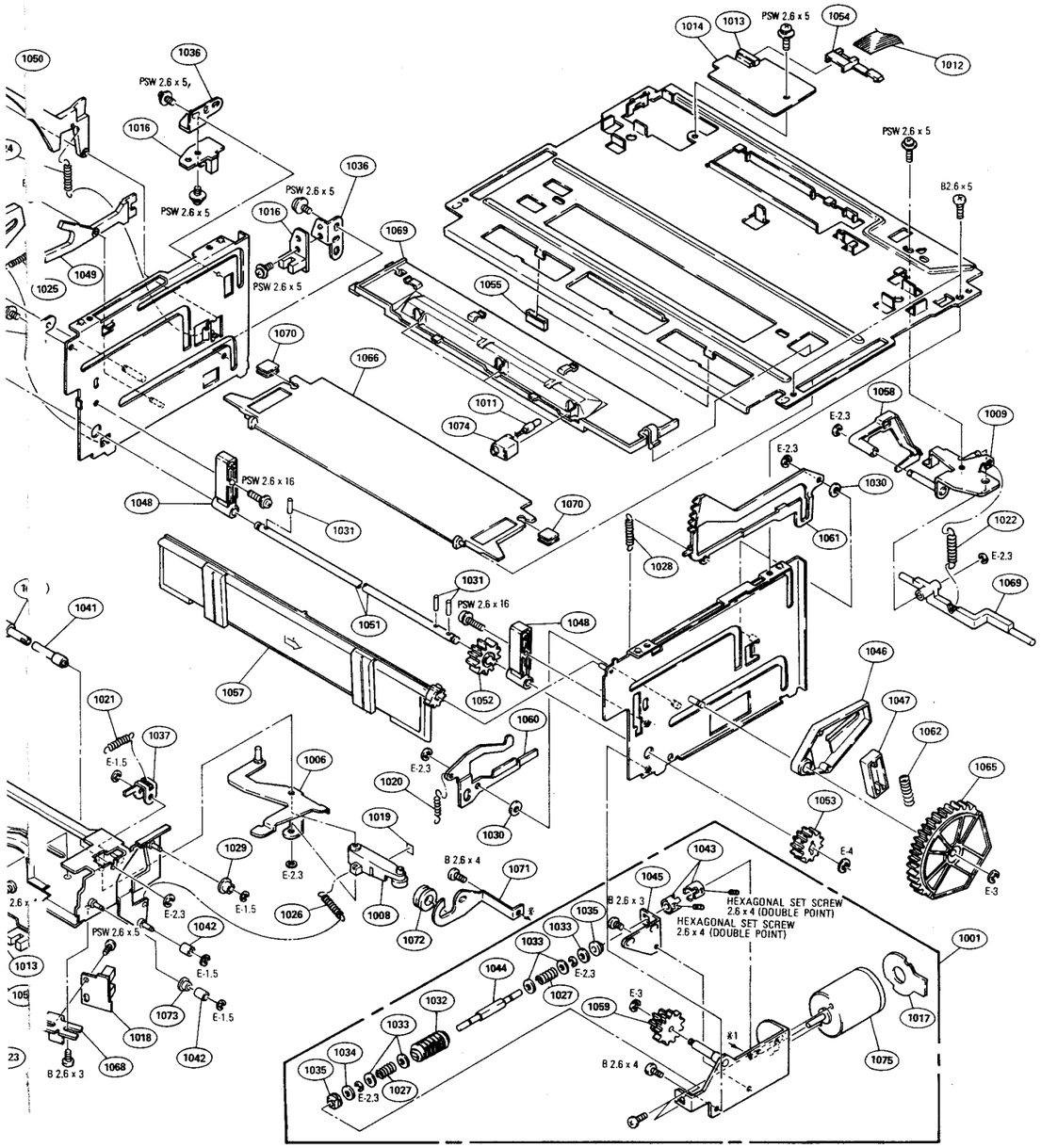
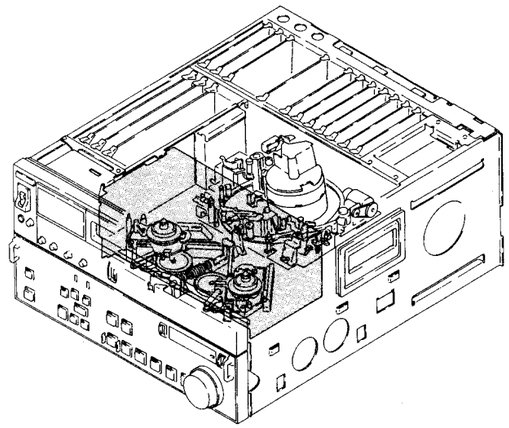
1041	3-71
1042	3-71
1043	3-71
1044	3-71
1045	3-71
1046	3-71

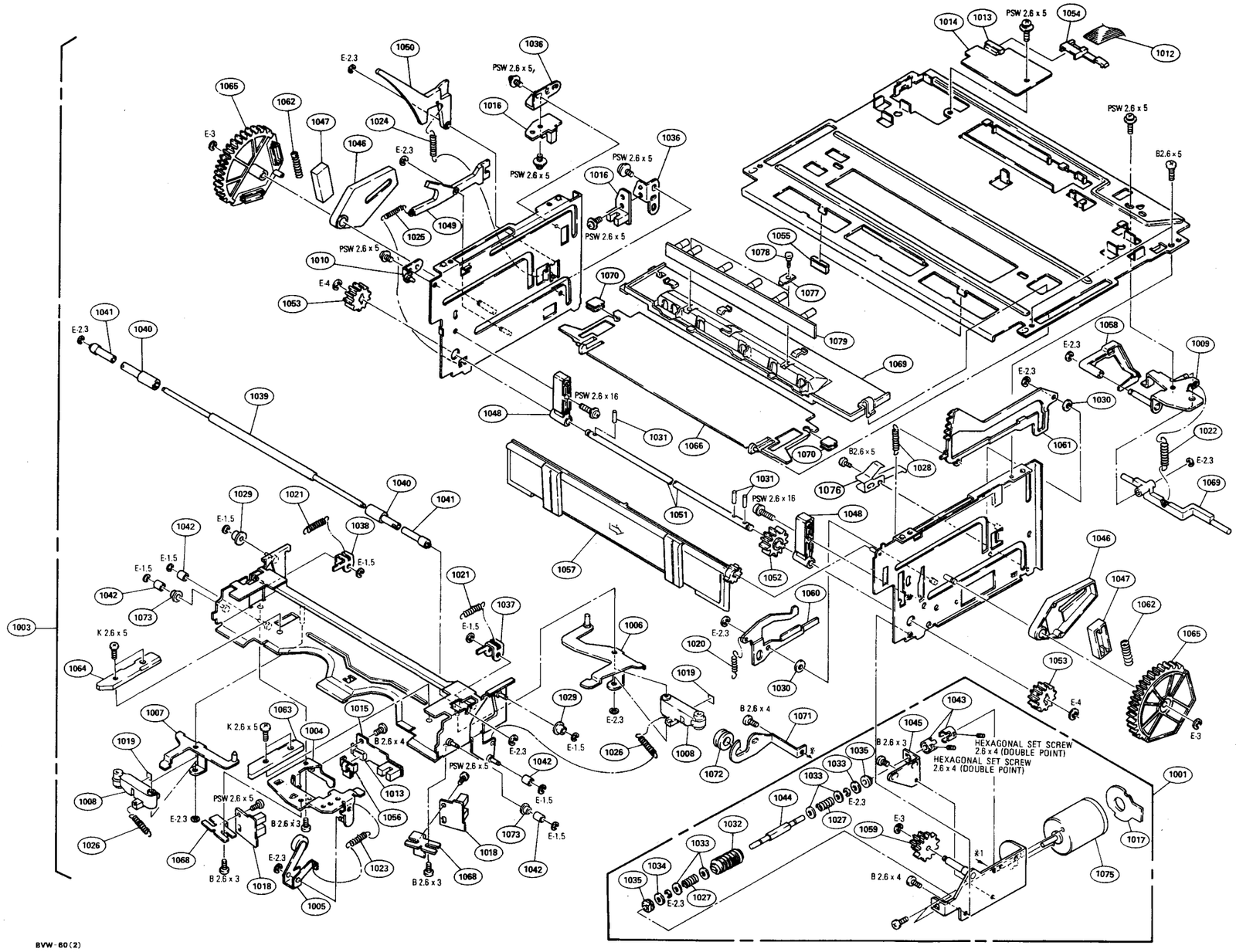


No.	Parts No.	SP	Description
1001	A-6737-178-A	s	MOTOR BLOCK ASS'Y
1003	A-6751-360-D	s	CASSETTE COMPARTMENT ASS'Y
1004	X-3717-230-1	o	DECK ASS'Y, ARM
1005	X-3717-231-1	o	ARM ASS'Y, LS
1006	X-3717-232-1	o	ARM (RIGHT) ASS'Y, CASSETTE IN
1007	X-3717-233-1	o	ARM (LEFT) ASS'Y, CASSETTE IN
1008	X-3717-234-1	o	ARM ASS'Y, PUSH OUT
1009	X-3717-235-1	o	CHASSIS ASS'Y, LID OPEN LEVER
1010	X-3717-236-1	o	BRACKET ASS'Y, DOOR
1011	1-518-508-00	s	LAMP, PILOT
1012	1-559-265-11	o	WIRE, FLEXIBLE CARD
1013	1-563-969-11	o	CONNECTOR, F.P.C, 7P
1014	1-622-602-11	o	PRINTED CIRCUIT BOARD, CL-14
1015	1-622-603-11	o	PRINTED CIRCUIT BOARD, PC-32
1016	1-622-604-11	o	PRINTED CIRCUIT BOARD, PC-47
1017	1-623-198-11	o	PRINTED CIRCUIT BOARD, CCM-2
1018	1-623-267-11	o	PRINTED CIRCUIT BOARD, PC-41
1019	3-329-460-01	o	SPACER
1020	3-437-284-00	s	SPRING, TENSION
1021	3-489-325-01	s	SPRING, TENSION
1022	3-491-360-00	S	SPRING, TENSION
1023	3-509-127-00	s	SPRING, TENSION
1024	3-140-263-XX	s	SPRING, TENSION (23T)
1025	3-531-863-01	s	SPRING, TENSION
1026	3-578-389-00	s	SPRING, TENSION
1027	3-659-324-00	s	SPRING, COMPRESSION
1028	3-668-508-00	s	SPRING, TENSION
1029	3-677-187-00	s	ROLLER, GUIDE
1030	3-701-439-21	s	WASHER POLY 3MM DIA. 0.5T
1031	3-703-358-03	o	PIN, PARALLEL (DIA.2 x 8)
1032	3-717-210-01	s	WORM
1033	3-717-212-01	o	WASHER (B), WORM
1034	3-717-213-01	o	WASHER (A), WORM
1035	3-717-214-01	o	BEARING, WORM
1036	3-717-339-01	o	BRACKET, PHOTO
1037	3-717-346-01	o	ARM (RIGHT), CASSETTE PRESS
1038	3-717-347-01	o	ARM (LEFT), CASSETTE PRESS
1039	3-717-348-01	o	SHAFT, PRESS ROLLER
1040	3-717-349-01	o	ROLLER (S), PRESS
1041	3-717-350-01	o	ROLLER (L), PRESS
1042	3-717-351-01	o	ROLLER (B), GUIDE
1043	3-717-352-01	o	JOINT, MOTOR
1044	3-717-353-01	o	SHAFT, WORM
1045	3-717-354-01	o	BRACKET, WORM
1046	3-717-355-01	o	ARM, DRIVING
1047	3-717-356-01	o	SLIDER, ARM DRIVING
1048	3-717-359-01	o	BEARING, DRIVING GEAR
1049	3-717-361-02	o	ARM (1), DOWN SW
1050	3-717-362-02	o	ARM (2), DOWN SW
1051	3-717-363-01	o	SHAFT, JOINT
1052	3-717-364-01	s	GEAR, JOINT
1053	3-717-365-01	s	GEAR, JOINT DRIVING
1054	3-717-368-01	o	HOLDER (B), F.P.C
1055	3-717-369-03	o	STOPPER, DOOR
1056	3-717-421-02	o	HOLDER (A), F.P.C
1057	3-717-435-04	o	DOOR, CASSETTE
1058	3-717-453-01	s	LEVER, LID OPEN
1059	3-717-454-01	o	WHEEL, WORM
1060	3-717-455-04	o	ARM, DOOR SWITCHING ASSIST
1061	3-717-457-01	o	ARM, DOOR SWITCHING
1062	3-717-458-01	s	SPRING, COMPRESSION
1063	3-717-460-03	o	GUIDE (RIGHT), CASSETTE
1064	3-717-461-03	o	GUIDE (LEFT), CASSETTE
1065	3-717-475-01	s	GEAR, DRIVING
1066	X-3717-365-1	o	REFLECTOR ASS'Y
1067	3-717-584-01	s	LEVER (B), LID OPEN
1068	3-717-585-01	o	BRACKET (B), PHOT
1069	3-717-586-01	o	HOLDER (MAIN), LAMP
1070	3-717-596-01	o	RUBBER, VIBRATION PROOF
1071	3-717-597-01	o	JOINT, PLATE
1072	3-717-598-01	o	JOINT, BEARWG
1073	3-717-599-01	s	ROLLER (C), GUIDE
1074	4-852-933-11	s	HOLDER, LAMP
1075	1-541-376-11	s	MOTOR, DC (DNR-4700A)

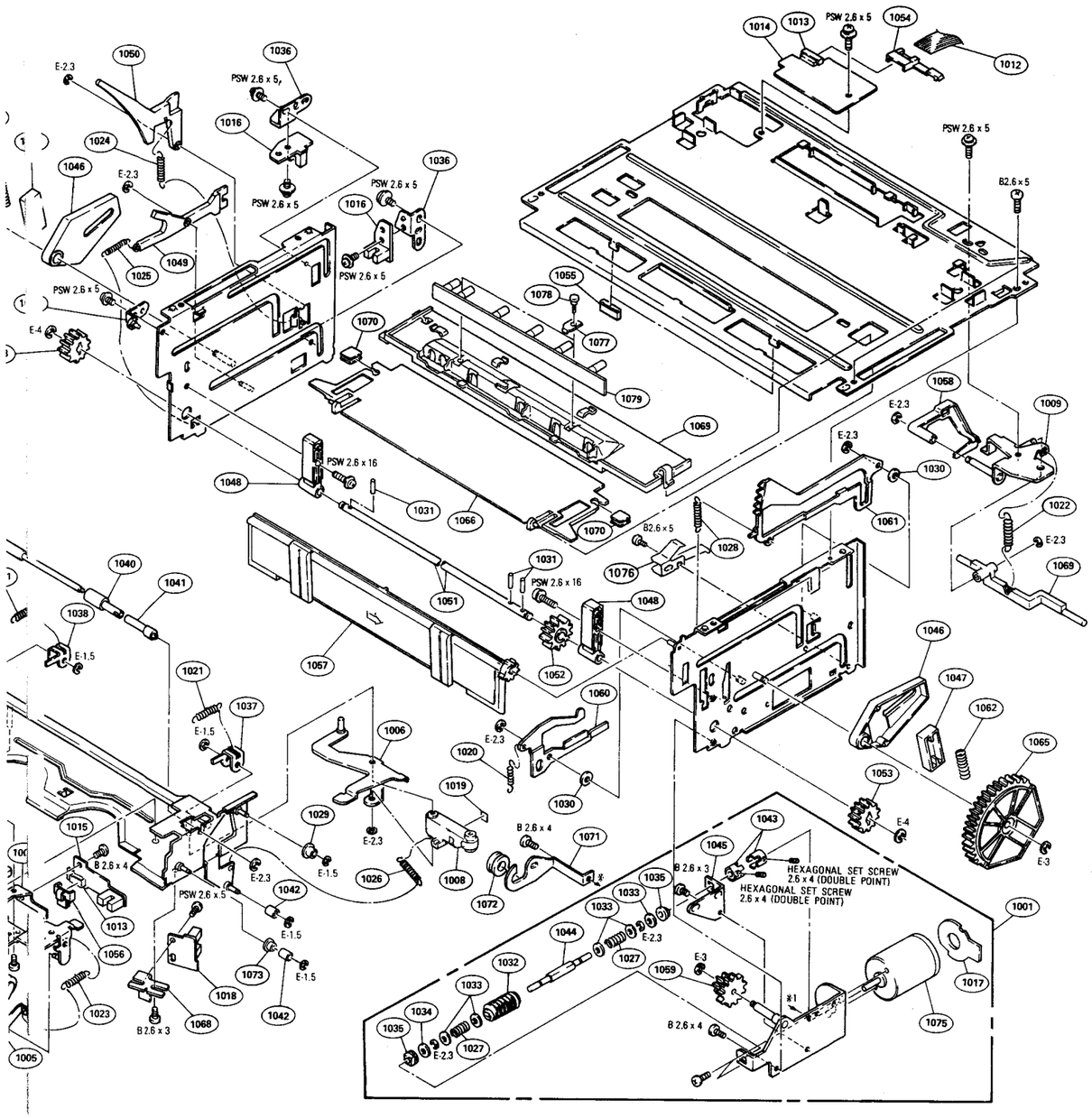
Cassette-up Compartment

S/N 10171 and higher



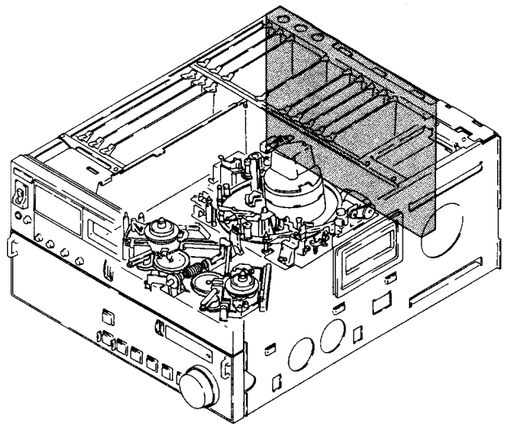


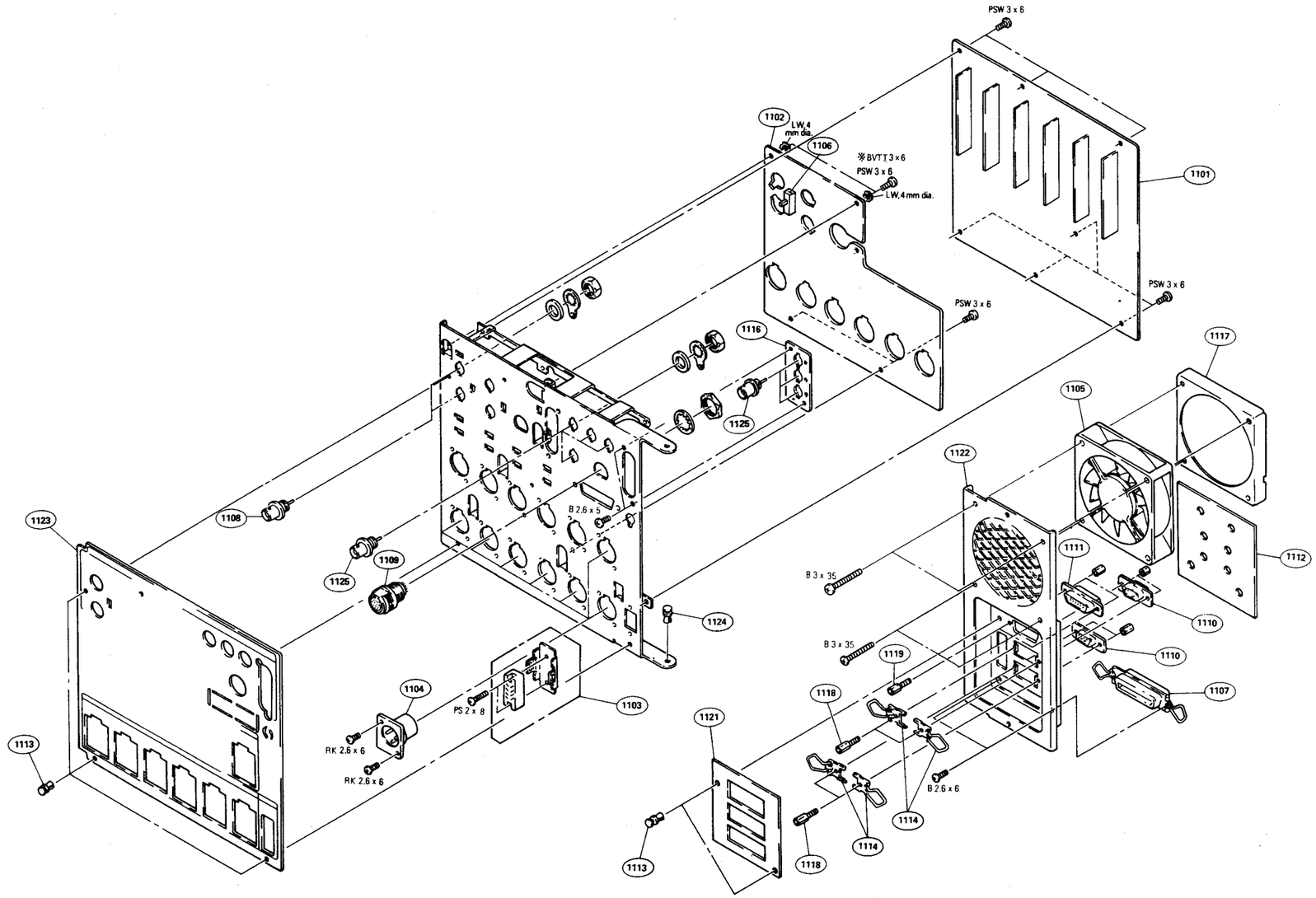
BVW-60(2)
BVW-65(2)
BVW-70(2)
BVW-60P(2)
BVW-65P(2)
BVW-70P(2)
BVW-70S(1)



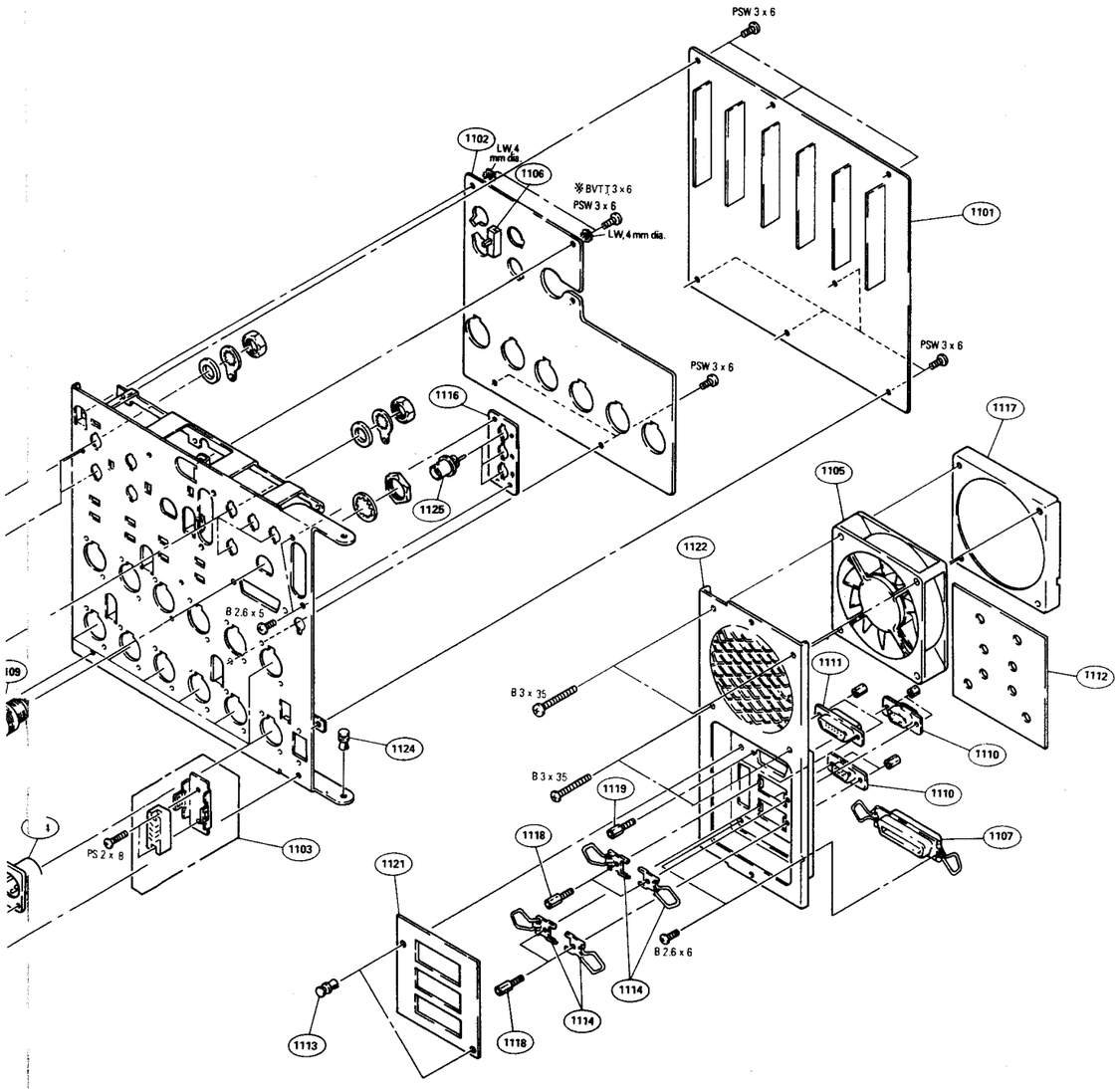
No.	Parts No.	SP	Description
1001	A-6737-178-A	s	MOTOR BLOCK ASS'Y
1003	A-6751-360-F	s	CASSETTE COMPARTMENT ASS'Y
1004	X-3717-360-1	o	DECK ASS'Y, ARM
1005	X-3717-231-1	o	ARM ASS'Y, LS
1006	X-3717-359-1	o	ARM (RIGHT) ASS'Y, CASSETTE IN
1007	X-3717-362-1	o	ARM (LEFT) ASS'Y, CASSETTE IN
1008	X-3717-361-1	o	ARM ASS'Y, PUSH OUT
1009	X-3717-235-1	o	CHASSIS ASS'Y, LID OPEN LEVER
1010	X-3717-236-1	o	BRACKET ASS'Y, DOOR
1012	1-559-265-11	o	WIRE, FLEXIBLE CARD
1013	1-563-969-11	o	CONNECTOR, F.P.C, 7P
1014	1-622-602-11	o	PRINTED CIRCUIT BOARD, CL-14
1015	1-622-603-11	o	PRINTED CIRCUIT BOARD, PC-32
1016	1-628-786-11	o	PRINTED CIRCUIT BOARD, PC-47
1017	1-623-198-11	o	PRINTED CIRCUIT BOARD, CCM-2
1018	1-623-267-11	o	PRINTED CIRCUIT BOARD, PC-41
1019	3-329-460-01	o	SPACER
1020	3-437-284-00	s	SPRING, TENSION
1021	3-489-325-01	s	SPRING, TENSION
1022	3-491-360-00	S	SPRING, TENSION
1023	3-509-127-00	s	SPRING, TENSION
1024	3-140-263-XX	s	SPRING, TENSION (23T)
1025	3-531-863-01	s	SPRING, TENSION
1026	3-578-389-00	s	SPRING, TENSION
1027	3-659-324-00	s	SPRING, COMPRESSION
1028	3-668-508-00	s	SPRING, TENSION
1029	3-677-187-00	s	ROLLER, GUIDE
1030	3-701-439-21	s	WASHER POLY 3MM DIA. 0.5T
1031	3-703-358-03	o	PIN, PARALLEL (DIA.2 x 8)
1032	3-717-210-01	s	WORM
1033	3-717-212-01	o	WASHER (B), WORM
1034	3-717-213-01	o	WASHER (A), WORM
1035	3-717-214-01	o	BEARING, WORM
1036	3-717-339-01	o	BRACKET, PHOTO
1037	3-717-346-01	o	ARM (RIGHT), CASSETTE PRESS
1038	3-717-347-01	o	ARM (LEFT), CASSETTE PRESS
1039	3-717-348-01	o	SHAFT, PRESS ROLLER
1040	3-717-349-01	o	ROLLER (S), PRESS
1041	3-717-350-01	o	ROLLER (L), PRESS
1042	3-717-351-01	o	ROLLER (B), GUIDE
1043	3-717-352-01	o	JOINT, MOTOR
1044	3-717-353-01	o	SHAFT, WORM
1045	3-717-354-01	o	BRACKET, WORM
1046	3-717-355-01	o	ARM, DRIVING
1047	3-717-356-01	o	SLIDER, ARM DRIVING
1048	3-717-359-01	o	BEARING, DRIVING GEAR
1049	3-717-361-02	o	ARM (1), DOWN SW
1050	3-717-362-02	o	ARM (2), DOWN SW
1051	3-717-363-01	o	SHAFT, JOINT
1052	3-717-364-01	s	GEAR, JOINT
1053	3-717-365-01	s	GEAR, JOINT DRIVING
1054	3-717-368-01	o	HOLDER (B), F.P.C
1055	3-717-369-03	o	STOPPER, DOOR
1056	3-717-421-02	o	HOLDER (A), F.P.C
1057	3-717-435-04	o	DOOR, CASSETTE
1058	3-717-453-01	s	LEVER, LID OPEN
1059	3-717-454-01	o	WHEEL, WORM
1060	3-717-455-04	o	ARM, DOOR SWITCHING ASSIST
1061	3-717-457-01	o	ARM, DOOR SWITCHING
1062	3-717-458-01	s	SPRING, COMPRESSION
1063	3-717-460-03	o	GUIDE (RIGHT), CASSETTE
1064	3-717-461-03	o	GUIDE (LEFT), CASSETTE
1065	3-717-475-01	s	GEAR, DRIVING
1066	X-3717-365-2	o	REFLECTOR ASS'Y
1067	3-717-584-01	s	LEVER (B), LID OPEN
1068	3-717-585-01	o	BRACKET (B), PHOT
1069	3-717-586-04	o	HOLDER (MAIN), LAMP
1070	3-717-596-01	o	RUBBER, VIBRATION PROOF
1071	3-717-597-01	o	JOINT, PLATE
1072	3-717-598-01	o	JOINT, BEARWG
1073	3-717-599-01	s	ROLLER (C), GUIDE
1075	1-541-376-11	s	MOTOR, DC (DNR-4700A)
1076	3-727-017-02	o	PLATE, GROUND
1077	3-738-709-01	s	PLATE
1078	3-646-090-00	s	RIVET
1079	1-635-029-11	s	PRINTED CIRCUIT BOARD, CL-24

Connector Panel Block





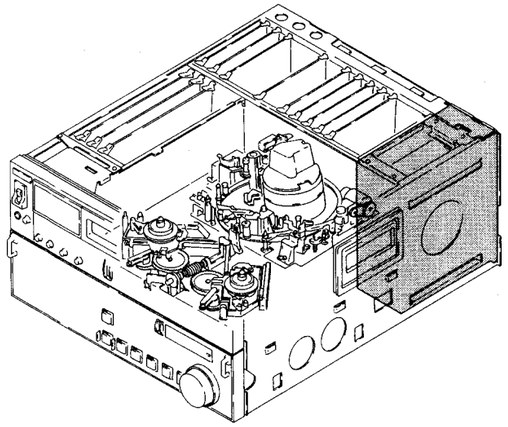
BVW-60(4)
BVW-65(4)
BVW-60P(3)
BVW-65P(4)



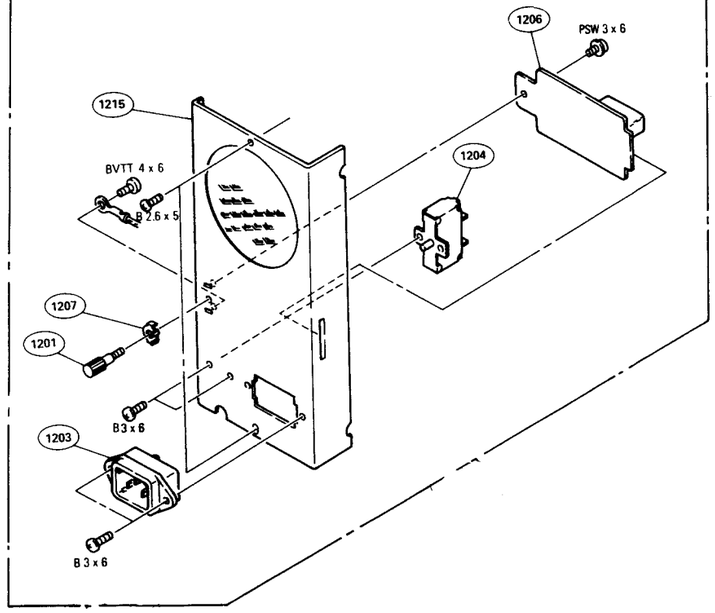
No.	Parts No.	SP	Description
1101	A-6713-274-A	o	MOUNTED CIRCUIT BOARD, CP-111
1102	A-6729-737-A	o	MOUNTED CIRCUIT BOARD, CP-101AP
1103	1-509-095-00	s	SOCKET, MULTI (8P)
1104	1-509-176-51	s	CONNECTOR, 3P, (FOR UC)
1105	1-541-524-11	s	MOTOR, DC FAN
1106	1-570-157-21	s	SWITCH, SLIDE
1107	1-561-028-00	s	CONNECTOR, 36P
1108	1-561-781-21	s	CONNECTOR, BNC (RECEPTACLE)
1109	1-562-160-00	s	CONNECTOR (R-F) 12P
1110	1-563-890-11	s	SOCKET, D-SUB CONNECTOR 9P
1111	1-566-441-11	s	PIN, D-SUB CONNECTOR 15P
1112	1-624-153-12	o	PRINTED CIRCUIT BOARD, RM-57
1113	3-531-576-01	s	RIVET
1114	3-668-460-00	o	SPRING
1116	3-717-325-03	o	BRACKET, CONNECTOR
1117	3-717-326-01	o	BRACKET, FAN COVER
1118	3-717-327-01	o	SCREW (9P), CONNECTOR
1119	3-717-328-01	o	SCREW (15P), CONNECTOR
1121	3-717-420-01	o	PLATE, ORNAMENTAL, PANEL
1122	3-717-485-01	o	PANEL (L), REAR
1123	3-717-663-02	s	PLATE (P), ORNAMENTAL, CONNECTOR
1124	4-818-403-01	s	RIVET
1125	1-561-781-11	s	CONNECTOR, BNC (RECEPTACLE)

*The screws (BVTT3 x 6) are used for S/N 10171 and higher.

Switching Regulator Block

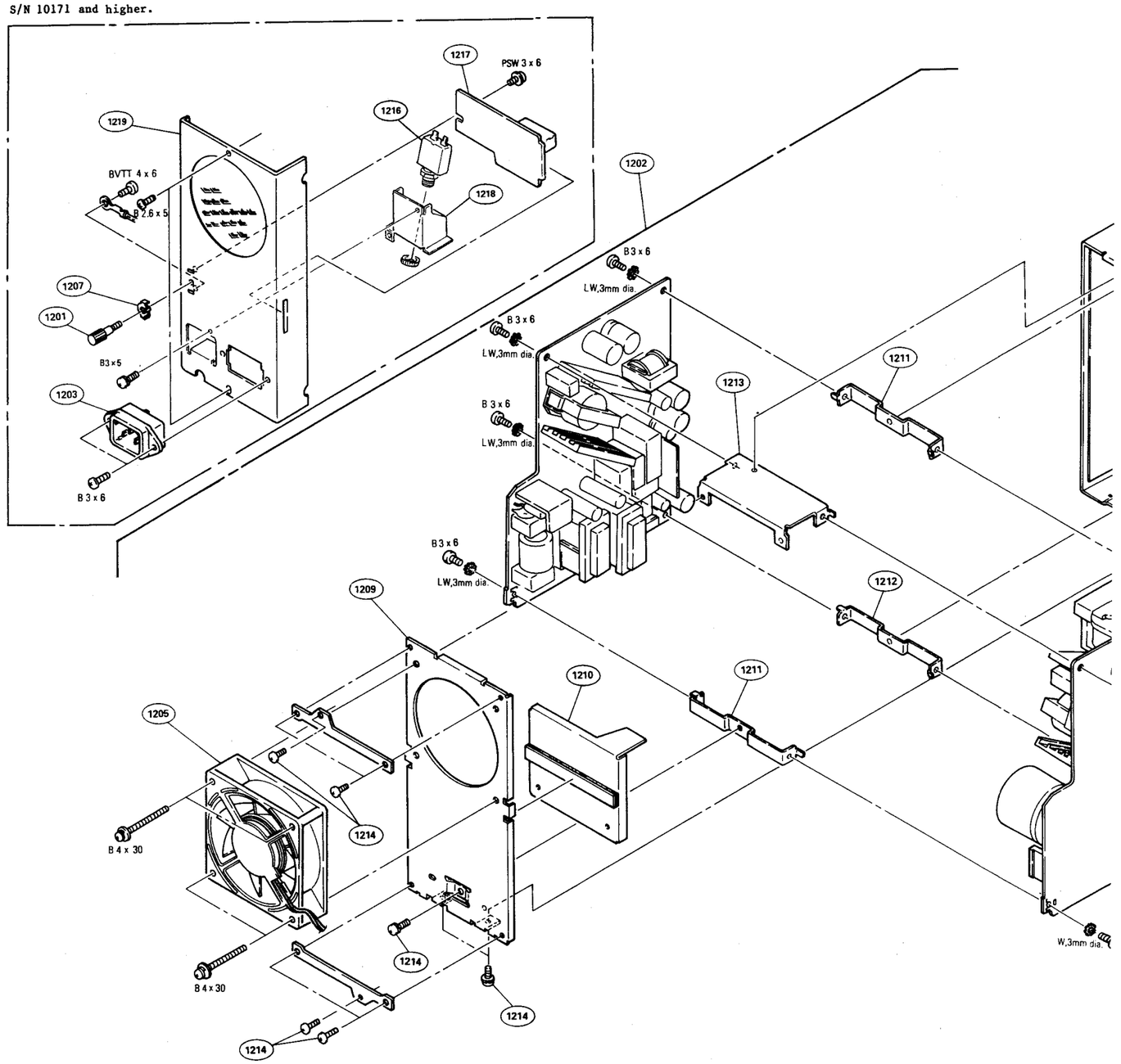


S/N up to 10170

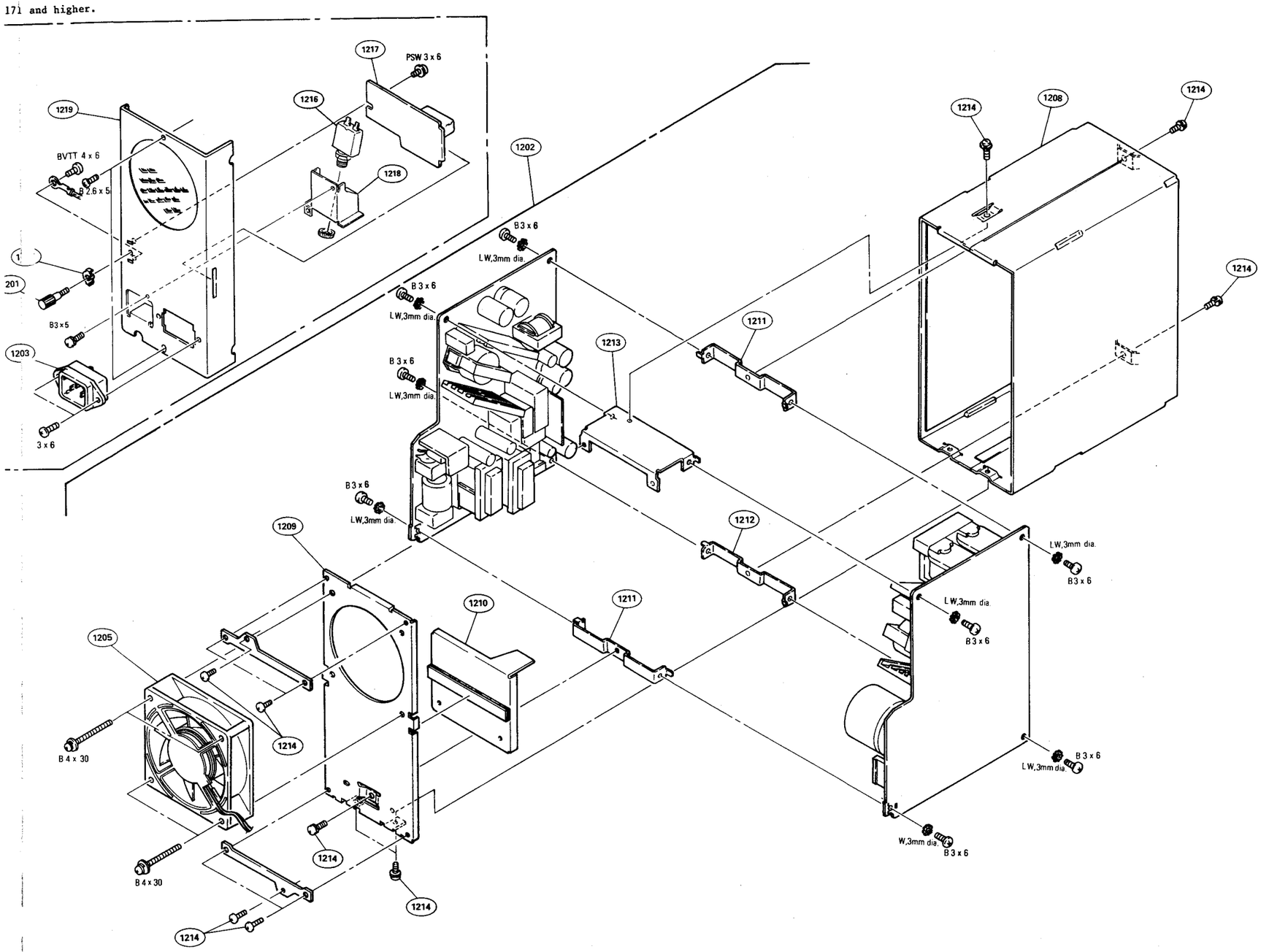


BVW-60(2)
BVW-65(2)
BVW-70(2)
BVW-60P(2)
BVW-65P(2)
BVW-70P(2)

S/N 10171 and higher.



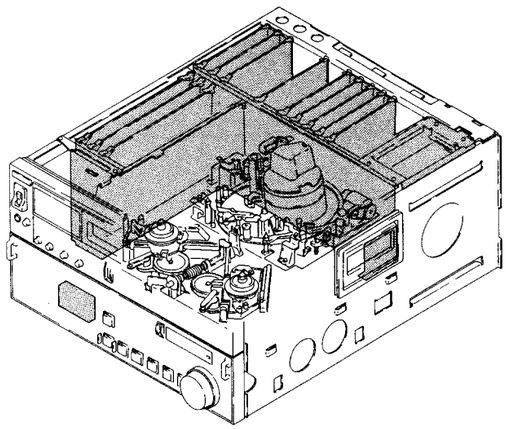
171 and higher.

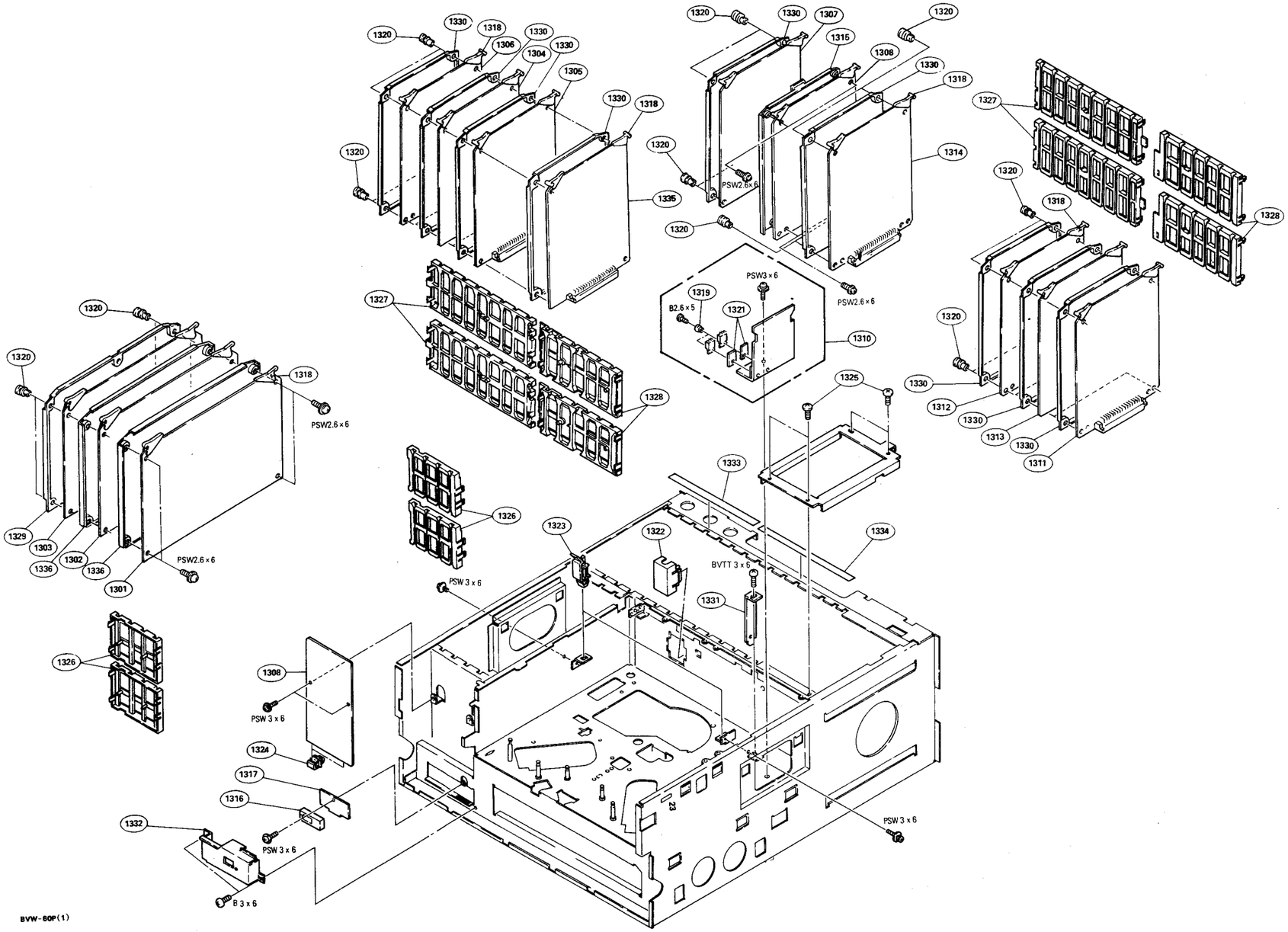


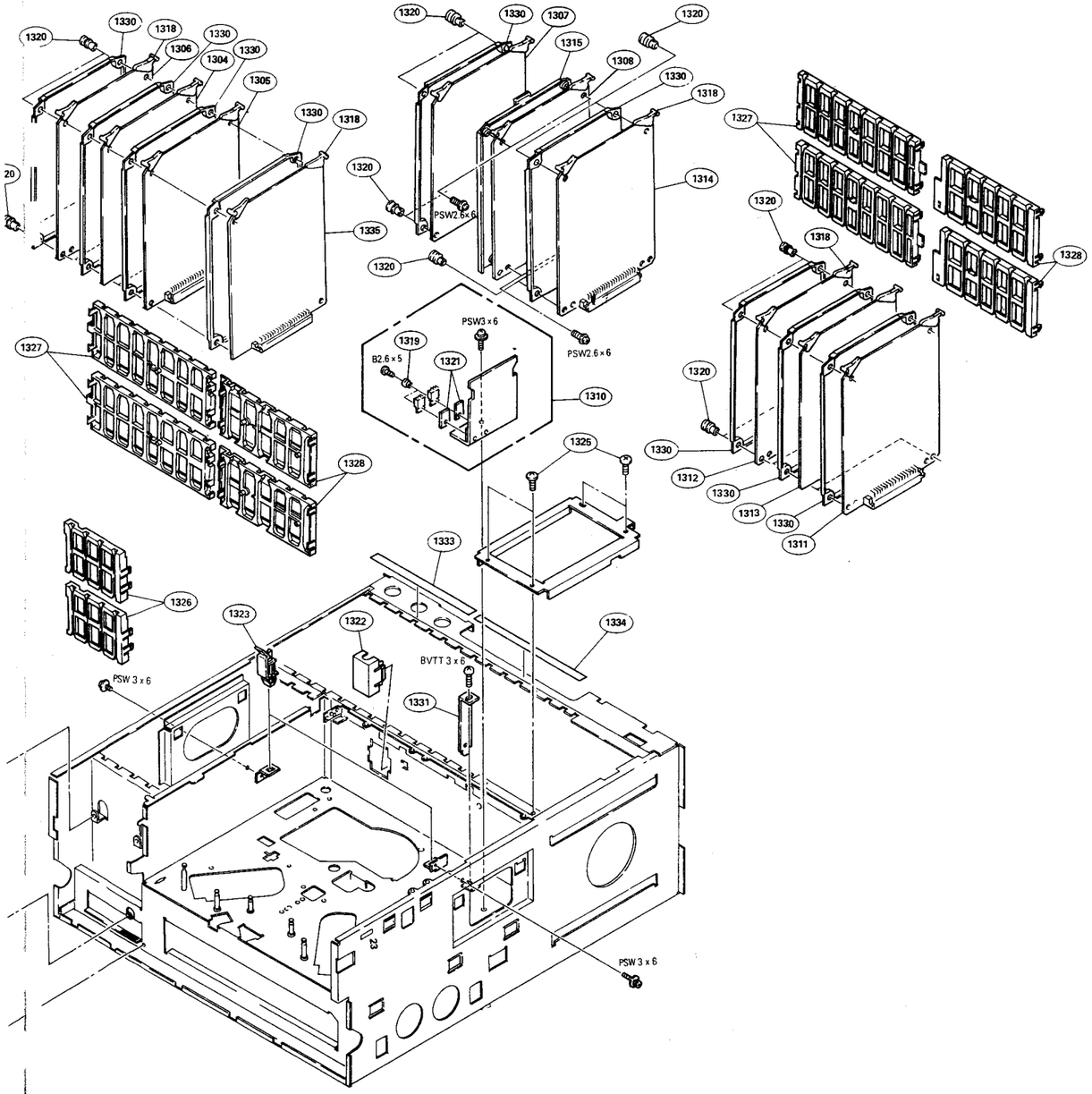
No.	Parts No.	SP	Description
1201	X-2068-004-0	s	TERMINAL ASS'Y
⚠ 1202	1-413-307-23	s	REGULATOR, SWITCHING (UR-21B)
1203	1-560-222-21	s	3P INLET
1204	1-532-545-51	s	BREAKER, CIRCUIT
1205	1-541-524-11	s	MOTOR, DC FAN
1206	1-622-608-11	o	PRINTED CIRCUIT BOARD, AC-81
1207	2-068-008-00	s	WASHER
1208	2-403-696-01	o	CASE
1209	2-403-697-11	o	LID, CASE
1210	2-431-695-01	o	SHEET(IS-UR21-S), INSULATING
1211	2-434-441-01	o	BRACKET
1212	2-434-441-11	o	BRACKET
1213	2-434-457-01	o	BRACKET, LS-UR21-S
1214	3-703-108-01	s	SCREW +BV 3 x 6, S TIGHT
1215	3-717-434-01	o	PANEL (R), REAR
⚠ 1216	1-576-036-11	s	BREAKER, CIRCUIT
1217	1-628-132-11	o	PRINTED, CIRCUIT BOARD, AC-96
1218	3-727-029-01	o	BRACKET, BREAKER
1219	3-727-030-01	o	PANEL (R), REAR

PRINTED CIRCUIT BOARD (1)

Printed Circuit Block (1)

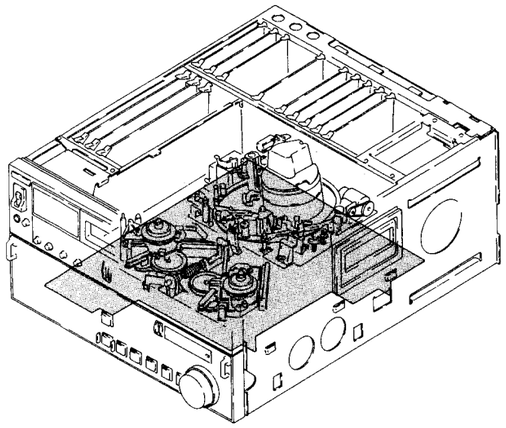


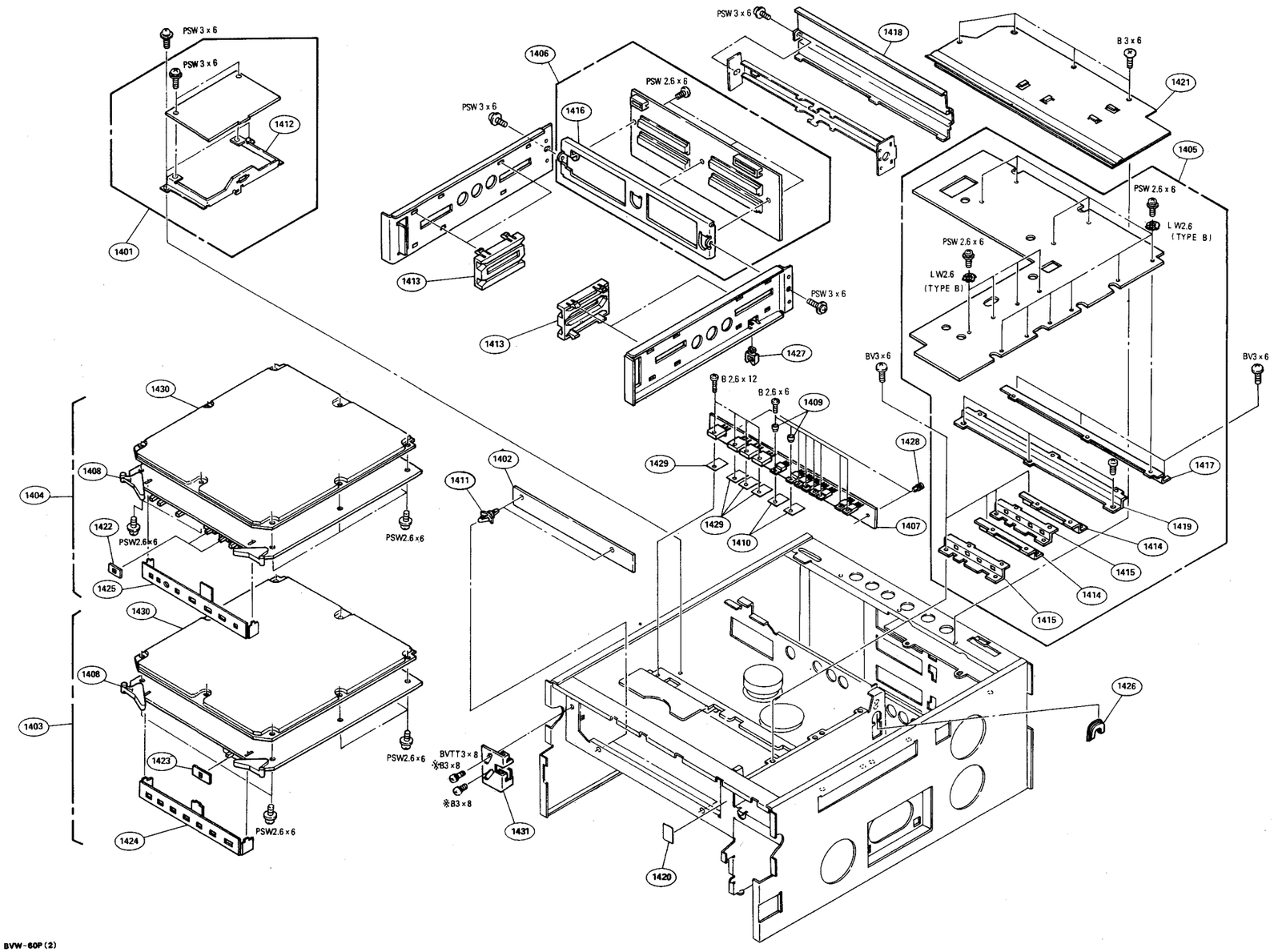




No.	Parts No.	SP	Description
1301	A-6711-904-B	o	MOUNTED CIRCUIT BOARD, DM-56P
1302	A-6711-888-A	o	MOUNTED CIRCUIT BOARD, TBC-7P (for S/N up to 10712)
	A-6727-094-A	o	MOUNTED CIRCUIT BOARD, TBC-7D (for S/N 10713 and higher)
1303	A-6711-889-C	o	MOUNTED CIRCUIT BOARD, TBC-8P (for S/N up to 10712)
	A-6727-078-A	o	MOUNTED CIRCUIT BOARD, TBC-12P (for S/N 10713 and higher)
1304	A-6711-891-A	o	MOUNTED CIRCUIT BOARD, EN-48P
1305	A-6711-953-A	o	MOUNTED CIRCUIT BOARD, VO-18AP
1306	A-6711-890-A	o	MOUNTED CIRCUIT BOARD, TBC-9P
1307	A-6713-914-A	o	MOUNTED CIRCUIT BOARD, AFM-1A
1308	A-6713-330-B	o	MOUNTED CIRCUIT BOARD, AU-118P
1309	A-6713-916-A	o	MOUNTED CIRCUIT BOARD, BF-28A
1310	A-6715-353-A	o	MOUNTED CIRCUIT BOARD, SE-57
1311	A-6715-386-A	o	MOUNTED CIRCUIT BOARD, SV-84P
1312	A-6715-394-A	o	MOUNTED CIRCUIT BOARD, SV-82A
1313	A-6715-403-A		MOUNTED CIRCUIT BOARD, SV-83B
1314	A-6717-488-A		MOUNTED CIRCUIT BOARD, TC-40AP
1315	X-3717-256-1	o	PLATE (S) ASS'Y, SHIELD, CARD
1316	1-548-152-11	o	HOURS METER, DIGITAL
1317	1-622-595-11	o	PRINTED CIRCUIT BOARD, HC-11
1318	2-251-622-11	s	LEVER, PC BOARD
1319	2-371-561-00	s	BUSHING (P), INSULATING
1320	3-531-576-01	s	RIVET
1321	3-660-978-00	s	SHEET, HEAT RESISTING
1322	3-677-741-00	o	GUARD, AIR
1323	3-682-047-01	o	HOLDER (A), PC BOARD
1324	3-703-072-00	o	HOLDER, PCB
1325	3-703-108-01	s	SCREW
1326	3-717-633-03	o	GUIDE P (M), PCB
1327	3-717-430-01	o	GUIDE (LL), PCB
1328	3-717-431-01	o	GUIDE (RL), PCB
1329	3-717-472-03	o	INSULATOR (M), CARD
1330	3-717-473-01	o	INSULATOR (S), CARD
1331	3-717-577-01	o	PROTECTOR, CASSETTE COMPARTMENT
1332	3-717-583-01	o	PLATE, INDICATION
1333	3-721-876-02	o	LABEL P (LL), PC BOARD
1334	3-725-067-01	o	LABEL (RL) (PB), PC BOARD
1335	A-6711-942-A	o	MOUNTED CIRCUIT BOARD, DEC-39A (for S/N up to 10622)
	A-6727-076-A	o	MOUNTED CIRCUIT BOARD, DEC-46AP (for S/N 10623 and higher)
1336	X-3717-255-1	o	PLATE (M) ASS'Y, SHIELD, CARD

Printed Circuit Block (2)

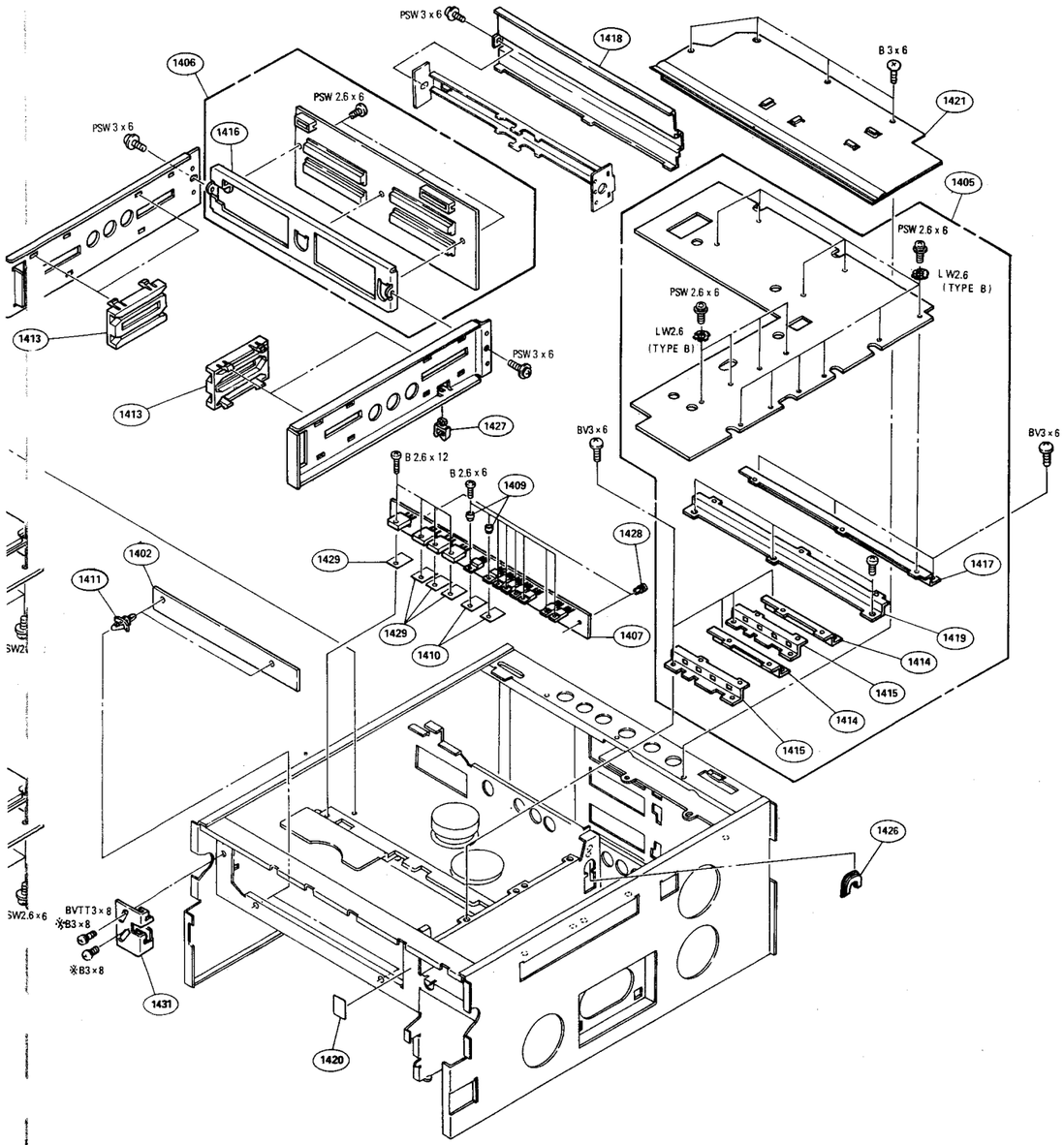




BVW-60P (2)

No.	Pa
1401	A-
1402	A-
1403	A-
1404	A-
1405	A-
1406	A-
1407	1-
1408	2-
1409	2-
1410	3-
1411	3-
1412	3-
1413	3-
1414	3-
1415	3-
1416	3-
1417	3-
1418	3-
1419	3-
1420	3-
1421	3-
1422	3-
1423	3-
1424	3-
1425	3-
1426	4-
1427	4-
1428	4-
1429	4-
1430	X-
1431	3-
★	

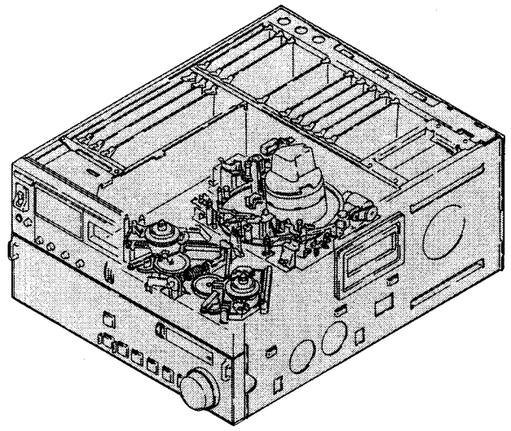
PRINTED CIRCUIT BOARD (2)

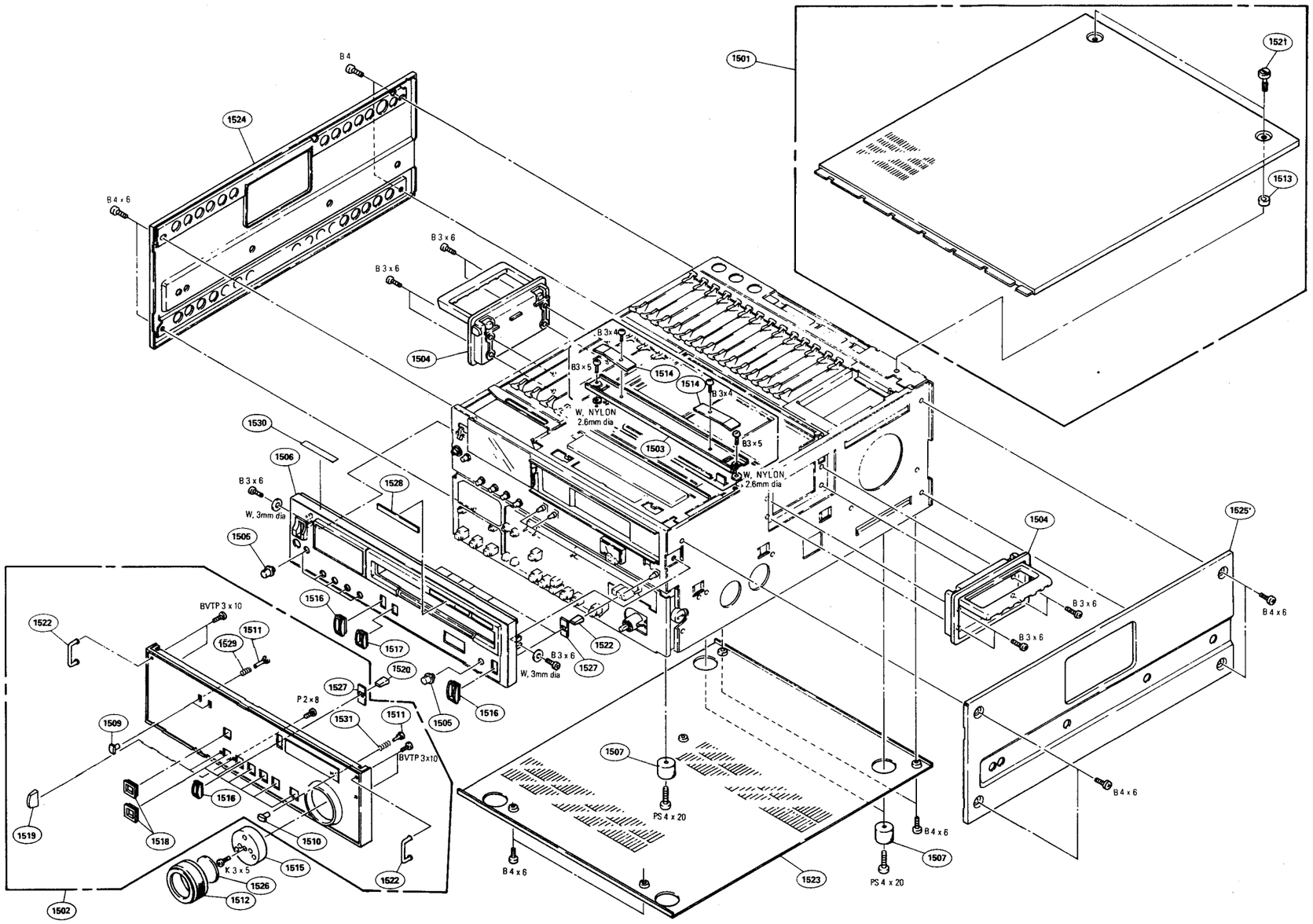


No.	Parts No.	SP	Description
1401	A-6715-354-A	o	MOUNTED CIRCUIT BOARD, RE-28
1402	A-6715-361-A	o	MOUNTED CIRCUIT BOARD, RE-36
1403	A-6717-487-A	o	MOUNTED CIRCUIT BOARD, SY-64AP
1404	A-6717-476-B	o	MOUNTED CIRCUIT BOARD, SY-61A
1405	A-6725-607-B	o	MOUNTED CIRCUIT BOARD, MB-191C
1406	A-6725-584-A	o	MOUNTED CIRCUIT BOARD, MB-192
1407	1-622-561-11	o	PRINTED CIRCUIT BOARD, DR-56
1408	2-251-622-11	s	LEVER, PC BOARD
1409	2-371-561-00	s	BUSHING (P), INSULATING
1410	3-660-978-00	s	SHEET, HEAT RESISTING
1411	3-703-353-01	o	SUPPORT, PC BOARD
1412	3-717-308-01	o	BRACKET (1), RE
1413	3-717-410-01	o	GUIDE (S), PCB
1414	3-717-631-01	o	BRACKET (P) (S), MB
1415	3-717-630-01	o	BRACKET (P) (M), MB
1416	3-717-468-01	o	JOINT, CONNECTOR
1417	3-717-480-04	o	BRACKET (LR), MB
1418	3-717-490-01	o	PLATE, SHIELD, MB-117
1419	3-717-491-05	o	BRACKET (LF), MB
1420	3-717-528-01	o	LABEL (S), PC BOARD
1421	3-717-543-01	o	GUARD, MB
1422	3-717-551-01	o	PLATE (SMALL), ORNAMENTAL, SLIDE
1423	3-717-552-01	o	PLATE (LARGE), ORNAMENTAL SLIDE
1424	3-721-879-01	o	SHEET METAL (64P) (PB)
1425	3-717-660-01	o	SHEET METAL (61) (PB), ORNAMENTAL
1426	4-302-401-00	s	BUSHING, DEGAUSSING COIL
1427	4-309-753-00	o	HOLDER, WIRE
1428	4-812-134-00	s	RIVET NYLON, 3.5
1429	4-911-232-01	s	SHEET, INSULATING
1430	X-3717-290-1	o	PLATE (L) ASS'Y, SHIELD, CARD
1431	3-727-012-02	o	STOPPER, SY

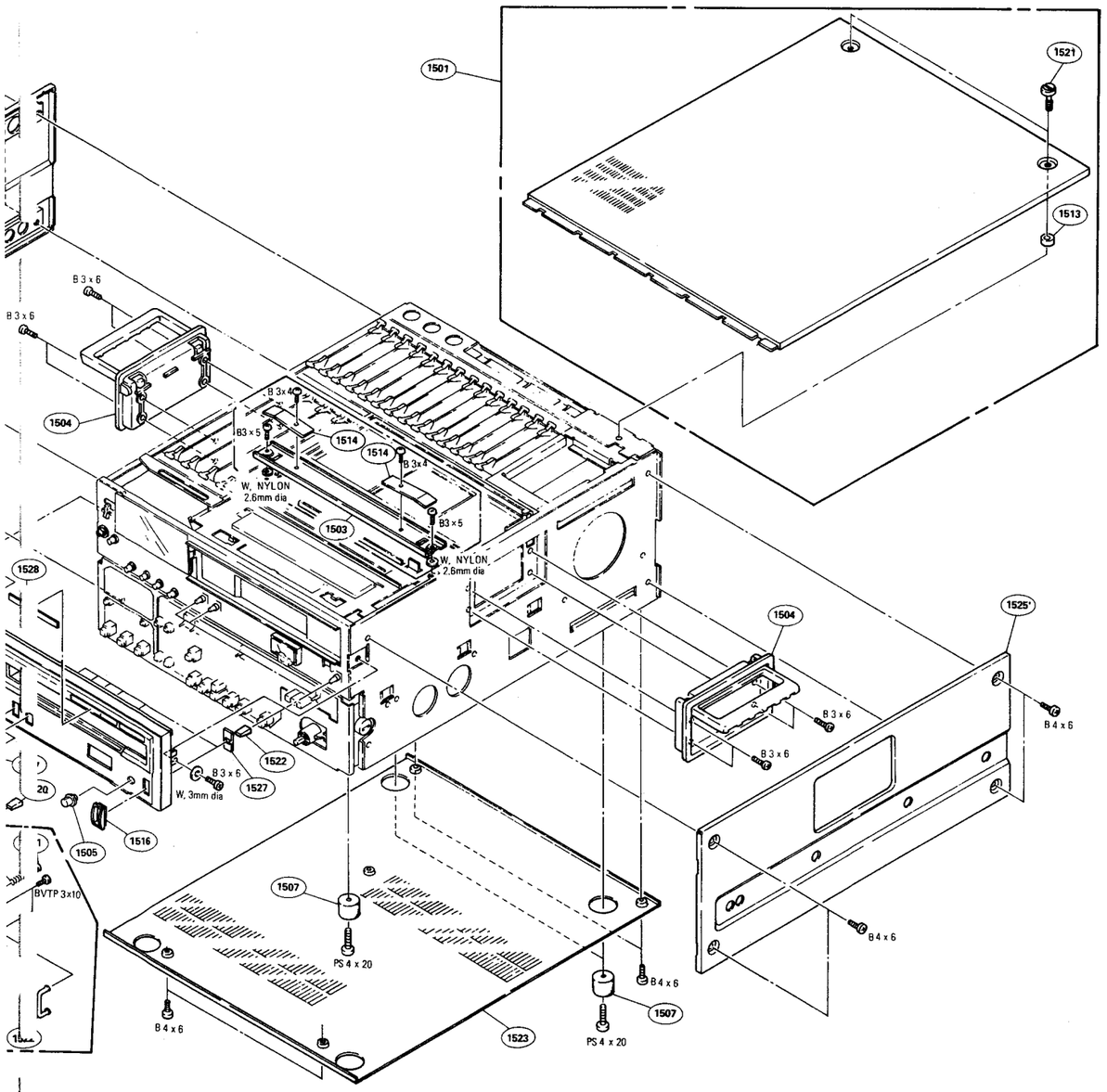
*The screws (B3 x 8) are used for S/N 10171 and higher.

Ornamental Panel Block





BVW-60P(1)



No.	Parts No.	SP	Description
1501	A-6703-674-A	o	LID (P) ASS'Y, UPPER
1502	A-6704-310-A	o	PANEL ASS'Y, KEY
1503	A-6730-932-A	s	STAY ASS'Y, CASSETTE COMPARTMENT
1504	X-3642-018-0	s	HANDLE ASS'Y
1505	X-3717-237-1	s	KNOB ASS'Y, VOL
1506	X-3717-282-1	o	PANEL SUB ASS'Y, FRONT
1507	3-642-656-01	s	FOOT
1508	3-668-007-02	s	PUSH BUTTON, 5 x 9 (BLACK)
1509	3-668-007-11	s	PUSH BUTTON, 5 x 9 (WHITE)
1510	3-668-008-02	s	PUSH BUTTON (3 x 5)
1511	3-668-009-02	s	PIN, PUSH BUTTON
1512	3-668-012-00	s	RUBBER, DIAL KNOB
1513	3-688-102-01	o	SPACER, M4
1514	3-717-306-01	o	SPRING
1515	3-717-370-01	o	KNOB, DIAL
1516	3-717-374-01	o	FRAME (23 x 12), ORNAMENTAL, SW
1517	3-717-375-01	o	FRAME (18 x 12), ORNAMENTAL, SW
1518	3-717-377-01	o	FRAME (SQUARE 17), ORNAMENTAL
1519	3-717-380-01	o	GUARD, REC
1520	3-717-382-01	s	KNOB, LEVER, SW
1521	3-717-392-01	o	SCREW, LID
1522	3-717-425-01	o	HAMDLE
1523	3-717-437-01	s	PLATE, BOTTOM
1524	3-717-482-01	o	CABINET (LEFT)
1525	3-717-483-01	o	CABINET (RIGHT)
1526	3-717-557-01	o	PLATE, KNOB
1527	3-717-613-01	o	PLATE ORNAMENTAL, LEVER SW
1528	3-717-685-21	s	LABEL, MODEL
1529	4-309-349-00	s	SPRING, COIL
1530	3-701-690-00	s	LABEL (MADE IN JAPAN)

19-3. ELECTRICAL PARTS LIST

General Purpose Electrical Parts List

Parts that are not listed in the "reference numbers order list"
are shown in following list.
Reference numbers are omitted.

ABBREVIATIONS

Ref. No.	Description	Ref. No.	Description	Ref. No.	Description
C□□, CT□□	CAPACITOR	IC□□	IC	Q□□	TRANSISTOR
CF□□	CERAMIC FILTER	J□□	JACK	R□□, RV□□	RESISTOR
CN□□	CONNECTOR	L□□	INDUCTOR	RY□□	RELAY
D□□	DIODE	M□□	MOTOR	S□□, SW□□	SWITCH
DL□□	DELAY LINE	ME□□	METER	SB□□	SOLAR BATTERY
F□□	FUSE	MIC□□	MICROPHONE	T□□	TRANSFORMER
FB□□	FERRITE BEAD	PG□□	PG COIL	TH□□	THERMISTOR
FL□□	FILTER	PL□□	LAMP	X□□	CRYSTAL
H□□	HEAD	PM□□	SOLENOIDE		

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

1) marked parts are for serial No. 10001 through 10060.
2) marked parts are for serial No. 10061 and higher.
3) marked parts are for serial No. 10001 through 10170.
4) marked parts are for serial No. 10171 and higher.
5) marked parts are for serial No. 10001 through 10270.
6) marked parts are for serial No. 10271 and higher.
7) marked parts are for serial No. 10001 through 10355.
8) marked parts are for serial No. 10356 and higher.
9) marked parts are for serial No. 10001 through 10455.
10) marked parts are for serial No. 10456 and higher.
11) marked parts are for serial No. 10061 through 10170.
12) marked parts are for serial No. 10001 through 10537.
13) marked parts are for serial No. 10538 and higher.
14) marked parts are for serial No. 10001 through 10622.
15) marked parts are for serial No. 10623 and higher.
16) marked parts are for serial No. 10456 through 10537.
17) marked parts are for serial No. 10061 through 10355.
18) marked parts are for serial No. 10171 through 10537.
19) marked parts are for serial No. 10001 through 10712.
20) marked parts are for serial No. 10713 and higher.
21) marked parts are for serial No. 10538 through 10622.
22) marked parts are for serial No. 10061 through 10712.
23) marked parts are for serial No. 10001 through 10802.
24) marked parts are for serial No. 10803 and higher.
25) marked parts are for serial No. 10001 through 10912.
26) marked parts are for serial No. 10913 and higher.

s No.	SP	Description			
.CITOR, CERAMIC, SBL					
·1-039-00	s	CAP, CERAMIC	0.001	10%	50V
·1-041-00	s	CAP, CERAMIC	0.0015	10%	50V
·1-043-00	s	CAP, CERAMIC	0.0022	10%	50V
·1-045-00	s	CAP, CERAMIC	0.0033	10%	50V
·1-047-00	s	CAP, CERAMIC	0.0047	10%	50V
·1-049-00	s	CAP, CERAMIC	0.0068	10%	50V
·1-051-00	s	CAP, CERAMIC	0.01	10%	50V
·1-053-00	s	CAP, CERAMIC	0.015	10%	50V
·1-055-00	s	CAP, CERAMIC	0.022	10%	50V
·1-057-00	s	CAP, CERAMIC	0.033	10%	50V
·1-021-11	s	CAP, CERAMIC	0.047	10%	25V
·1-059-00	s	CAP, CERAMIC	0.047	10%	50V
·1-061-00	s	CAP, CERAMIC	0.068	10%	50V
·1-772-11	s	CAP, CERAMIC	0.1	10%	25V
·1-063-00	s	CAP, CERAMIC	0.1	10%	50V
ACITOR, CHIP CERAMIC					
63-083-00	s	CAP, CHIP CERAMIC	1pF	±0.25pF	50V
63-085-00	s	CAP, CHIP CERAMIC	2pF	±0.25pF	50V
63-087-00	s	CAP, CHIP CERAMIC	4pF	±0.25pF	50V
63-089-00	s	CAP, CHIP CERAMIC	6pF	±0.5pF	50V
63-091-00	s	CAP, CHIP CERAMIC	8pF	±0.5pF	50V
63-093-00	s	CAP, CHIP CERAMIC	10pF	5%	50V
63-097-00	s	CAP, CHIP CERAMIC	15pF	5%	50V
63-101-00	s	CAP, CHIP CERAMIC	22pF	5%	50V
63-105-00	s	CAP, CHIP CERAMIC	33pF	5%	50V
63-109-00	s	CAP, CHIP CERAMIC	47pF	5%	50V
63-113-00	s	CAP, CHIP CERAMIC	68pF	5%	50V
63-117-00	s	CAP, CHIP CERAMIC	100pF	5%	50V
63-121-00	s	CAP, CHIP CERAMIC	150pF	5%	50V
63-125-00	s	CAP, CHIP CERAMIC	220pF	5%	50V
63-129-00	s	CAP, CHIP CERAMIC	330pF	5%	50V
63-133-00	s	CAP, CHIP CERAMIC	470pF	5%	50V
63-137-00	s	CAP, CHIP CERAMIC	680pF	5%	50V
63-141-00	s	CAP, CHIP CERAMIC	1000pF	5%	50V
63-145-00	s	CAP, CHIP CERAMIC	1500pF	10%	50V
63-013-00	s	CAP, CHIP CERAMIC	2200pF	10%	50V
63-015-00	s	CAP, CHIP CERAMIC	3300pF	10%	50V
63-017-00	s	CAP, CHIP CERAMIC	4700pF	10%	50V
63-019-00	s	CAP, CHIP CERAMIC	6800pF	10%	50V
63-021-00	s	CAP, CHIP CERAMIC	0.01	10%	50V
63-023-00	s	CAP, CHIP CERAMIC	0.015	10%	50V
63-034-00	s	CAP, CHIP CERAMIC	0.033		50V
63-035-00	s	CAP, CHIP CERAMIC	0.047		50V
63-036-00	s	CAP, CHIP CERAMIC	0.068		50V
63-038-00	s	CAP, CHIP CERAMIC	0.1		50V

Parts No.	SP	Description			
CAPACITOR, ELECTROLYTIC					
1-124-902-00	s	CAP, ELECT	0.47	20%	50V
1-124-791-11	s	CAP, ELECT	1.0	20%	100V
1-124-925-11	s	CAP, ELECT	2.2	20%	100V
1-123-382-00	s	CAP, ELECT	3.3	20%	100V
1-124-927-00	s	CAP, ELECT	4.7	20%	100V
1-123-875-91	s	CAP, ELECT	10	20%	50V
1-124-908-11	s	CAP, ELECT	22	20%	50V
1-124-963-11	s	CAP, ELECT	33	20%	16V
1-124-482-11	s	CAP, ELECT	33	20%	35V
1-124-917-11	s	CAP, ELECT	33	20%	63V
1-124-446-11	s	CAP, ELECT	47	20%	10V
1-124-477-11	s	CAP, ELECT	47	20%	25V
1-124-910-11	s	CAP, ELECT	47	20%	50V
1-124-443-00	s	CAP, ELECT	100	20%	10V
1-126-101-11	s	CAP, ELECT	100	20%	16V
1-124-478-11	s	CAP, ELECT	100	20%	25V
1-124-122-11	s	CAP, ELECT	100	20%	50V
1-124-444-00	s	CAP, ELECT	220	20%	10V
1-124-120-11	s	CAP, ELECT	220	20%	25V
1-124-484-11	s	CAP, ELECT	220	20%	35V
1-124-911-11	s	CAP, ELECT	220	20%	50V
1-124-442-00	s	CAP, ELECT	330	20%	6.3V
1-124-604-00	s	CAP, ELECT	330	20%	10V
1-124-119-00	s	CAP, ELECT	330	20%	16V
1-124-479-11	s	CAP, ELECT	330	20%	25V
1-124-485-11	s	CAP, ELECT	330	20%	35V
1-124-912-11	s	CAP, ELECT	330	20%	50V
1-124-472-11	s	CAP, ELECT	470	20%	10V
1-124-475-11	s	CAP, ELECT	470	20%	16V
1-124-480-11	s	CAP, ELECT	470	20%	25V
1-126-104-11	s	CAP, ELECT	470	20%	35V
1-124-913-11	s	CAP, ELECT	470	20%	50V
CAPACITOR, MICA, SILVERED					
1-107-019-00	s	CAP, MICA	1.0pF	±0.5pF	500V
1-107-039-00	s	CAP, MICA	1.2pF	±0.5pF	500V
1-107-040-00	s	CAP, MICA	1.5pF	±0.5pF	500V
1-107-041-00	s	CAP, MICA	1.8pF	±0.5pF	500V
1-107-042-00	s	CAP, MICA	2.2pF	±0.5pF	500V
1-107-043-00	s	CAP, MICA	2.7pF	±0.5pF	500V
1-107-044-00	s	CAP, MICA	3.3pF	±0.5pF	500V
1-107-045-00	s	CAP, MICA	3.9pF	±0.5pF	500V
1-107-046-00	s	CAP, MICA	4.7pF	±0.5pF	500V
1-107-026-00	s	CAP, MICA	5.1pF	±0.5pF	500V
1-107-047-00	s	CAP, MICA	5.6pF	±0.5pF	500V
1-107-048-00	s	CAP, MICA	6.8pF	±0.5pF	500V
1-107-049-00	s	CAP, MICA	8.2pF	±0.5pF	500V
1-107-202-00	s	CAP, MICA	10pF	5%	500V
1-107-203-00	s	CAP, MICA	11pF	5%	500V
1-107-204-00	s	CAP, MICA	12pF	5%	500V
1-107-205-00	s	CAP, MICA	13pF	5%	500V
1-107-206-00	s	CAP, MICA	15pF	5%	500V
1-107-207-00	s	CAP, MICA	16pF	5%	500V
1-107-208-00	s	CAP, MICA	18pF	5%	500V
1-107-209-00	s	CAP, MICA	20pF	5%	500V
1-107-210-00	s	CAP, MICA	22pF	5%	500V
1-107-211-00	s	CAP, MICA	24pF	5%	500V
1-107-157-00	s	CAP, MICA	27pF	5%	500V
1-107-158-00	s	CAP, MICA	30pF	5%	500V

Parts No.	SP	Description
INDUCTOR, MICRO		
1-408-397-00	s	INDUCTOR, MICRO 1.0 5%
1-408-399-00	s	INDUCTOR, MICRO 1.5 5%
1-408-400-00	s	INDUCTOR, MICRO 1.8 5%
1-408-401-00	s	INDUCTOR, MICRO 2.2 5%
1-408-403-00	s	INDUCTOR, MICRO 3.3 5%
1-408-404-00	s	INDUCTOR, MICRO 3.9 5%
1-408-405-00	s	INDUCTOR, MICRO 4.7 5%
1-408-406-00	s	INDUCTOR, MICRO 5.6 5%
1-408-407-00	s	INDUCTOR, MICRO 6.8 5%
1-408-408-00	s	INDUCTOR, MICRO 8.2 5%
1-408-409-00	s	INDUCTOR, MICRO 10 5%
1-408-410-00	s	INDUCTOR, MICRO 12 5%
1-408-411-00	s	INDUCTOR, MICRO 15 5%
1-408-412-00	s	INDUCTOR, MICRO 18 5%
1-408-413-00	s	INDUCTOR, MICRO 22 5%
1-408-414-00	s	INDUCTOR, MICRO 27 5%
1-408-415-00	s	INDUCTOR, MICRO 33 5%
1-408-416-00	s	INDUCTOR, MICRO 39 5%
1-408-417-00	s	INDUCTOR, MICRO 47 5%
1-408-418-00	s	INDUCTOR, MICRO 56 5%
1-408-419-00	s	INDUCTOR, MICRO 68 5%
1-408-420-00	s	INDUCTOR, MICRO 82 5%
1-408-421-00	s	INDUCTOR, MICRO 100 5%
1-408-422-00	s	INDUCTOR, MICRO 120 5%
1-408-423-00	s	INDUCTOR, MICRO 150 5%
1-408-424-00	s	INDUCTOR, MICRO 180 5%
1-408-425-00	s	INDUCTOR, MICRO 220 5%
1-408-426-00	s	INDUCTOR, MICRO 270 5%
1-408-427-00	s	INDUCTOR, MICRO 330 5%
1-408-428-00	s	INDUCTOR, MICRO 390 5%
1-408-429-00	s	INDUCTOR, MICRO 470 5%
1-410-116-11	s	INDUCTOR, MICRO 560 5%
1-410-492-11	s	INDUCTOR, MICRO 680 5%
1-410-493-11	s	INDUCTOR, MICRO 820 5%
1-410-494-11	s	INDUCTOR, MICRO 1000 5%

Parts No.	SP	Description
RESISTOR, CARBON		
1-249-381-11	s	RES, CARBON 1.0 5% 1/6W
1-249-382-11	s	RES, CARBON 1.2 5% 1/6W
1-249-383-11	s	RES, CARBON 1.5 5% 1/6W
1-249-384-11	s	RES, CARBON 1.8 5% 1/6W
1-249-385-11	s	RES, CARBON 2.2 5% 1/6W
1-249-386-11	s	RES, CARBON 2.7 5% 1/6W
1-249-387-11	s	RES, CARBON 3.3 5% 1/6W
1-249-388-11	s	RES, CARBON 3.9 5% 1/6W
1-249-389-11	s	RES, CARBON 4.7 5% 1/6W
1-249-390-11	s	RES, CARBON 5.6 5% 1/6W
1-249-391-11	s	RES, CARBON 6.8 5% 1/6W
1-249-392-11	s	RES, CARBON 8.2 5% 1/6W
1-249-393-11	s	RES, CARBON 10 5% 1/6W
1-249-394-11	s	RES, CARBON 12 5% 1/6W
1-249-395-11	s	RES, CARBON 15 5% 1/6W
1-249-396-11	s	RES, CARBON 18 5% 1/6W
1-249-397-11	s	RES, CARBON 22 5% 1/6W
1-249-398-11	s	RES, CARBON 27 5% 1/6W
1-249-399-11	s	RES, CARBON 33 5% 1/6W
1-249-400-11	s	RES, CARBON 39 5% 1/6W
1-249-401-11	s	RES, CARBON 47 5% 1/6W
1-249-402-11	s	RES, CARBON 56 5% 1/6W
1-249-403-11	s	RES, CARBON 68 5% 1/6W
1-249-404-11	s	RES, CARBON 82 5% 1/6W
1-249-405-11	s	RES, CARBON 100 5% 1/6W
1-249-406-11	s	RES, CARBON 120 5% 1/6W
1-249-407-11	s	RES, CARBON 150 5% 1/6W
1-249-408-11	s	RES, CARBON 180 5% 1/6W
1-249-409-11	s	RES, CARBON 220 5% 1/6W
1-249-410-11	s	RES, CARBON 270 5% 1/6W
1-249-411-11	s	RES, CARBON 330 5% 1/6W
1-249-412-11	s	RES, CARBON 390 5% 1/6W
1-249-413-11	s	RES, CARBON 470 5% 1/6W
1-249-414-11	s	RES, CARBON 560 5% 1/6W
1-249-415-11	s	RES, CARBON 680 5% 1/6W
1-249-416-11	s	RES, CARBON 820 5% 1/6W
1-249-417-11	s	RES, CARBON 1.0k 5% 1/6W
1-249-418-11	s	RES, CARBON 1.2k 5% 1/6W
1-249-419-11	s	RES, CARBON 1.5k 5% 1/6W
1-249-420-11	s	RES, CARBON 1.8k 5% 1/6W
1-249-421-11	s	RES, CARBON 2.2k 5% 1/6W
1-249-422-11	s	RES, CARBON 2.7k 5% 1/6W
1-249-423-11	s	RES, CARBON 3.3k 5% 1/6W
1-249-424-11	s	RES, CARBON 3.9k 5% 1/6W
1-249-425-11	s	RES, CARBON 4.7k 5% 1/6W
1-249-426-11	s	RES, CARBON 5.6k 5% 1/6W
1-249-427-11	s	RES, CARBON 6.8k 5% 1/6W
1-249-428-11	s	RES, CARBON 8.2k 5% 1/6W
1-249-429-11	s	RES, CARBON 10k 5% 1/6W
1-249-430-11	s	RES, CARBON 12k 5% 1/6W
1-249-431-11	s	RES, CARBON 15k 5% 1/6W
1-249-432-11	s	RES, CARBON 18k 5% 1/6W
1-249-433-11	s	RES, CARBON 22k 5% 1/6W
1-249-434-11	s	RES, CARBON 27k 5% 1/6W
1-249-435-11	s	RES, CARBON 33k 5% 1/6W
1-249-436-11	s	RES, CARBON 39k 5% 1/6W
1-249-437-11	s	RES, CARBON 47k 5% 1/6W
1-249-438-11	s	RES, CARBON 56k 5% 1/6W
1-249-439-11	s	RES, CARBON 68k 5% 1/6W
1-249-440-11	s	RES, CARBON 82k 5% 1/6W
1-249-441-11	s	RES, CARBON 100k 5% 1/6W

Parts No.	SP	Description
RESISTOR, CHIP		
1-216-295-00	s	RES, CHIP 0 5% 1/10W
1-216-298-00	s	RES, CHIP 2.2 5% 1/10W
1-216-302-00	s	RES, CHIP 2.7 5% 1/10W
1-216-304-00	s	RES, CHIP 3.3 5% 1/10W
1-216-306-00	s	RES, CHIP 3.9 5% 1/10W
1-216-308-00	s	RES, CHIP 4.7 5% 1/10W
1-216-309-00	s	RES, CHIP 5.6 5% 1/10W
1-216-311-00	s	RES, CHIP 6.8 5% 1/10W
1-216-313-00	s	RES, CHIP 8.2 5% 1/10W
1-216-001-00	s	RES, CHIP 10 5% 1/10W
1-216-003-00	s	RES, CHIP 12 5% 1/10W
1-216-005-00	s	RES, CHIP 15 5% 1/10W
1-216-007-00	s	RES, CHIP 18 5% 1/10W
1-216-009-00	s	RES, CHIP 22 5% 1/10W
1-216-011-00	s	RES, CHIP 27 5% 1/10W
1-216-013-00	s	RES, CHIP 33 5% 1/10W
1-216-015-00	s	RES, CHIP 39 5% 1/10W
1-216-017-00	s	RES, CHIP 47 5% 1/10W
1-216-019-00	s	RES, CHIP 56 5% 1/10W
1-216-021-00	s	RES, CHIP 68 5% 1/10W
1-216-023-00	s	RES, CHIP 82 5% 1/10W
1-216-025-00	s	RES, CHIP 100 5% 1/10W
1-216-027-00	s	RES, CHIP 120 5% 1/10W
1-216-029-00	s	RES, CHIP 150 5% 1/10W
1-216-031-00	s	RES, CHIP 180 5% 1/10W
1-216-033-00	s	RES, CHIP 220 5% 1/10W
1-216-035-00	s	RES, CHIP 270 5% 1/10W
1-216-037-00	s	RES, CHIP 330 5% 1/10W
1-216-039-00	s	RES, CHIP 390 5% 1/10W
1-216-041-00	s	RES, CHIP 470 5% 1/10W
1-216-043-00	s	RES, CHIP 560 5% 1/10W
1-216-045-00	s	RES, CHIP 680 5% 1/10W
1-216-047-00	s	RES, CHIP 820 5% 1/10W
1-216-049-00	s	RES, CHIP 1k 5% 1/10W
1-216-051-00	s	RES, CHIP 1.2k 5% 1/10W
1-216-053-00	s	RES, CHIP 1.5k 5% 1/10W
1-216-055-00	s	RES, CHIP 1.8k 5% 1/10W
1-216-057-00	s	RES, CHIP 2.2k 5% 1/10W
1-216-059-00	s	RES, CHIP 2.7k 5% 1/10W
1-216-061-00	s	RES, CHIP 3.3k 5% 1/10W
1-216-063-00	s	RES, CHIP 3.9k 5% 1/10W
1-216-065-00	s	RES, CHIP 4.7k 5% 1/10W
1-216-067-00	s	RES, CHIP 5.6k 5% 1/10W
1-216-069-00	s	RES, CHIP 6.8k 5% 1/10W
1-216-071-00	s	RES, CHIP 8.2k 5% 1/10W
1-216-073-00	s	RES, CHIP 10k 5% 1/10W
1-216-075-00	s	RES, CHIP 12k 5% 1/10W
1-216-077-00	s	RES, CHIP 15k 5% 1/10W
1-216-079-00	s	RES, CHIP 18k 5% 1/10W
1-216-081-00	s	RES, CHIP 22k 5% 1/10W
1-216-083-00	s	RES, CHIP 27k 5% 1/10W
1-216-085-00	s	RES, CHIP 33k 5% 1/10W
1-216-087-00	s	RES, CHIP 39k 5% 1/10W
1-216-089-00	s	RES, CHIP 47k 5% 1/10W
1-216-091-00	s	RES, CHIP 56k 5% 1/10W

Parts No.	SP	Description
1-216-093-00	s	RES, CHIP 68k 5% 1/10W
1-216-095-00	s	RES, CHIP 82k 5% 1/10W
1-216-097-00	s	RES, CHIP 100k 5% 1/10W
1-216-099-00	s	RES, CHIP 120k 5% 1/10W
1-216-101-00	s	RES, CHIP 150k 5% 1/10W
1-216-103-00	s	RES, CHIP 180k 5% 1/10W
1-216-105-00	s	RES, CHIP 220k 5% 1/10W
1-216-107-00	s	RES, CHIP 270k 5% 1/10W
1-216-109-00	s	RES, CHIP 330k 5% 1/10W
1-216-111-00	s	RES, CHIP 390k 5% 1/10W
1-216-113-00	s	RES, CHIP 470k 5% 1/10W
1-216-115-00	s	RES, CHIP 560k 5% 1/10W
1-216-117-00	s	RES, CHIP 680k 5% 1/10W
1-216-119-00	s	RES, CHIP 820k 5% 1/10W
1-216-121-00	s	RES, CHIP 1.0M 5% 1/10W
1-216-123-00	s	RES, CHIP 1.2M 5% 1/10W
1-216-125-00	s	RES, CHIP 1.5M 5% 1/10W
1-216-127-00	s	RES, CHIP 1.8M 5% 1/10W
1-216-129-00	s	RES, CHIP 2.2M 5% 1/10W
1-216-131-00	s	RES, CHIP 2.7M 5% 1/10W
1-216-133-00	s	RES, CHIP 3.3M 5% 1/10W

Parts No.	SP	Description
RESISTOR, METAL		
1-215-373-31	s	RES, METAL 10 1% 1/6W
1-215-374-00	s	RES, METAL 11 1% 1/6W
1-215-375-00	s	RES, METAL 12 1% 1/6W
1-215-376-00	s	RES, METAL 13 1% 1/6W
1-215-377-00	s	RES, METAL 15 1% 1/6W
1-215-378-00	s	RES, METAL 16 1% 1/6W
1-215-379-00	s	RES, METAL 18 1% 1/6W
1-215-380-00	s	RES, METAL 20 1% 1/6W
1-215-381-00	s	RES, METAL 22 1% 1/6W
1-215-382-00	s	RES, METAL 24 1% 1/6W
1-215-383-00	s	RES, METAL 27 1% 1/6W
1-215-384-00	s	RES, METAL 30 1% 1/6W
1-215-385-00	s	RES, METAL 33 1% 1/6W
1-215-386-00	s	RES, METAL 36 1% 1/6W
1-215-387-00	s	RES, METAL 39 1% 1/6W
1-215-388-00	s	RES, METAL 43 1% 1/6W
1-215-389-00	s	RES, METAL 47 1% 1/6W
1-215-390-00	s	RES, METAL 51 1% 1/6W
1-215-391-00	s	RES, METAL 56 1% 1/6W
1-215-392-00	s	RES, METAL 62 1% 1/6W
1-215-393-00	s	RES, METAL 68 1% 1/6W
1-215-394-00	s	RES, METAL 75 1% 1/6W
1-215-395-00	s	RES, METAL 82 1% 1/6W
1-215-396-00	s	RES, METAL 91 1% 1/6W
1-215-397-00	s	RES, METAL 100 1% 1/6W
1-215-398-00	s	RES, METAL 110 1% 1/6W
1-215-399-00	s	RES, METAL 120 1% 1/6W
1-215-400-00	s	RES, METAL 130 1% 1/6W
1-215-401-00	s	RES, METAL 150 1% 1/6W
1-215-402-00	s	RES, METAL 160 1% 1/6W
1-215-403-00	s	RES, METAL 180 1% 1/6W
1-215-404-00	s	RES, METAL 200 1% 1/6W
1-215-405-00	s	RES, METAL 220 1% 1/6W
1-215-406-00	s	RES, METAL 240 1% 1/6W
1-215-407-00	s	RES, METAL 270 1% 1/6W
1-215-408-00	s	RES, METAL 300 1% 1/6W
1-215-409-00	s	RES, METAL 330 1% 1/6W
1-215-410-00	s	RES, METAL 360 1% 1/6W
1-215-411-00	s	RES, METAL 390 1% 1/6W
1-215-412-00	s	RES, METAL 430 1% 1/6W
1-215-413-00	s	RES, METAL 470 1% 1/6W
1-215-414-00	s	RES, METAL 510 1% 1/6W
1-215-415-00	s	RES, METAL 560 1% 1/6W
1-215-416-00	s	RES, METAL 620 1% 1/6W
1-215-417-00	s	RES, METAL 680 1% 1/6W
1-215-418-00	s	RES, METAL 750 1% 1/6W
1-215-419-00	s	RES, METAL 820 1% 1/6W
1-215-420-00	s	RES, METAL 910 1% 1/6W
1-215-421-00	s	RES, METAL 1.0k 1% 1/6W
1-215-422-00	s	RES, METAL 1.1k 1% 1/6W
1-215-423-00	s	RES, METAL 1.2k 1% 1/6W
1-215-424-00	s	RES, METAL 1.3k 1% 1/6W
1-215-425-00	s	RES, METAL 1.5k 1% 1/6W
1-215-426-00	s	RES, METAL 1.6k 1% 1/6W
1-215-427-00	s	RES, METAL 1.8k 1% 1/6W
1-215-428-00	s	RES, METAL 2.0k 1% 1/6W
1-215-429-00	s	RES, METAL 2.2k 1% 1/6W
1-215-430-00	s	RES, METAL 2.4k 1% 1/6W
1-215-431-00	s	RES, METAL 2.7k 1% 1/6W
1-215-432-00	s	RES, METAL 3.0k 1% 1/6W

Parts No.	SP	Description
1-215-433-00	s	RES, METAL 3.3k 1% 1/6W
1-215-434-00	s	RES, METAL 3.6k 1% 1/6W
1-215-435-00	s	RES, METAL 3.9k 1% 1/6W
1-215-436-00	s	RES, METAL 4.3k 1% 1/6W
1-215-437-00	s	RES, METAL 4.7k 1% 1/6W
1-215-438-00	s	RES, METAL 5.1k 1% 1/6W
1-215-439-00	s	RES, METAL 5.6k 1% 1/6W
1-215-440-00	s	RES, METAL 6.2k 1% 1/6W
1-215-441-00	s	RES, METAL 6.8k 1% 1/6W
1-215-442-00	s	RES, METAL 7.5k 1% 1/6W
1-215-443-00	s	RES, METAL 8.2k 1% 1/6W
1-215-444-00	s	RES, METAL 9.1k 1% 1/6W
1-215-445-00	s	RES, METAL 10k 1% 1/6W
1-215-446-00	s	RES, METAL 11k 1% 1/6W
1-215-447-00	s	RES, METAL 12k 1% 1/6W
1-215-448-00	s	RES, METAL 13k 1% 1/6W
1-215-449-00	s	RES, METAL 15k 1% 1/6W
1-215-450-00	s	RES, METAL 16k 1% 1/6W
1-215-451-00	s	RES, METAL 18k 1% 1/6W
1-215-452-00	s	RES, METAL 20k 1% 1/6W
1-215-453-00	s	RES, METAL 22k 1% 1/6W
1-215-454-00	s	RES, METAL 24k 1% 1/6W
1-215-455-00	s	RES, METAL 27k 1% 1/6W
1-215-456-00	s	RES, METAL 30k 1% 1/6W
1-215-457-00	s	RES, METAL 33k 1% 1/6W
1-215-458-00	s	RES, METAL 36k 1% 1/6W
1-215-459-00	s	RES, METAL 39k 1% 1/6W
1-215-460-00	s	RES, METAL 43k 1% 1/6W
1-215-461-00	s	RES, METAL 47k 1% 1/6W
1-215-462-00	s	RES, METAL 51k 1% 1/6W
1-215-463-00	s	RES, METAL 56k 1% 1/6W
1-215-464-00	s	RES, METAL 62k 1% 1/6W
1-215-465-00	s	RES, METAL 68k 1% 1/6W
1-215-466-00	s	RES, METAL 75k 1% 1/6W
1-215-467-00	s	RES, METAL 82k 1% 1/6W
1-215-468-00	s	RES, METAL 91k 1% 1/6W
1-215-469-00	s	RES, METAL 100k 1% 1/6W
1-215-470-00	s	RES, METAL 110k 1% 1/6W
1-215-471-00	s	RES, METAL 120k 1% 1/6W
1-215-472-00	s	RES, METAL 130k 1% 1/6W
1-215-473-00	s	RES, METAL 150k 1% 1/6W
1-215-474-00	s	RES, METAL 160k 1% 1/6W
1-215-475-00	s	RES, METAL 180k 1% 1/6W
1-215-476-00	s	RES, METAL 200k 1% 1/6W
1-215-477-00	s	RES, METAL 220k 1% 1/6W
1-215-478-00	s	RES, METAL 240k 1% 1/6W
1-215-479-00	s	RES, METAL 270k 1% 1/6W
1-215-480-00	s	RES, METAL 300k 1% 1/6W
1-215-481-00	s	RES, METAL 330k 1% 1/6W
1-215-482-00	s	RES, METAL 360k 1% 1/6W
1-215-483-00	s	RES, METAL 390k 1% 1/6W
1-215-484-00	s	RES, METAL 430k 1% 1/6W
1-215-485-00	s	RES, METAL 470k 1% 1/6W
1-215-486-00	s	RES, METAL 510k 1% 1/6W
1-215-487-00	s	RES, METAL 560k 1% 1/6W
1-215-488-00	s	RES, METAL 620k 1% 1/6W
1-215-489-00	s	RES, METAL 680k 1% 1/6W
1-215-490-00	s	RES, METAL 750k 1% 1/6W
1-215-491-00	s	RES, METAL 820k 1% 1/6W
1-215-492-00	s	RES, METAL 910k 1% 1/6W
1-215-493-00	s	RES, METAL 1.0M 1% 1/6W

Ref.No.	Parts No.	SP	Description
3) **AC-81 BOARD**			
	1-622-608-12	o	PRINTED CIRCUIT BOARD, AC-81
⚠C1	1-136-185-00	s	FILM 0.22 20% 250V
C2	1-161-742-00	s	CERAMIC 0.0022 20% 400V
C3	1-161-742-00	s	CERAMIC 0.0022 20% 400V
C4	1-161-742-00	s	CERAMIC 0.0022 20% 400V
⚠CN420	1-564-241-00	o	4P
	1-562-285-11	o	4P HOUSING
	1-562-210-11	o	4P CONTACT
CN421	1-564-674-11	o	8P
	1-562-640-11	o	8P HOUSING
	1-562-210-11	o	8P CONTACT
R1	1-214-937-00	s	CARBON 1M 5% 1/2W
4) **AC-96 BOARD**			
	1-628-132-11	o	PRINTED CIRCUIT BOARD, AC-96
⚠C1	1-136-185-00	s	FILM 0.22 20% 250V
C2	1-161-742-00	s	CERAMIC 0.0022 20% 400V
C3	1-161-742-00	s	CERAMIC 0.0022 20% 400V
C4	1-161-742-00	s	CERAMIC 0.0022 20% 400V
⚠CN420	1-564-241-00	o	4P
	1-562-285-11	o	4P HOUSING
	1-562-210-11	o	4P CONTACT
CN421	1-564-674-11	o	8P
	1-562-640-11	o	8P HOUSING
	1-562-210-11	o	8P CONTACT
R1	1-214-937-00	s	CARBON 1M 5% 1/2W
AFM-1A BOARD			
This board includes the FL-61 board.			
	A-6713-914-A	o	MOUNTED CIRCUIT BOARD, AFM-1A
C2	1-163-033-00	s	CERAMIC 0.022 50V
C4	1-163-033-00	s	CERAMIC 0.022 50V
C9	1-163-033-00	s	CERAMIC 0.022 50V
C15	1-124-463-00	s	ELECT 0.1 20% 50V
C17	1-163-033-00	s	CERAMIC 0.022 50V

Ref.No.	Parts No.	SP	Description
C21	1-163-033-00	s	CERAMIC 0.022 50V
C27	1-124-463-00	s	ELECT 0.1 20% 50V
C29	1-163-033-00	s	CERAMIC 0.022 50V
C103	1-163-033-00	s	CERAMIC 0.022 50V
C113	1-123-369-00	s	ELECT 4.7 20% 25V
C114	1-163-033-00	s	CERAMIC 0.022 50V
C115	1-163-135-00	s	CERAMIC 560pF 5% 50V
C116	1-124-499-11	s	ELECT 1 20% 50V
C119	1-163-033-00	s	CERAMIC 0.022 50V
C130	1-123-369-00	s	ELECT 4.7 20% 25V
C131	1-163-135-00	s	CERAMIC 560pF 5% 50V
C132	1-124-499-11	s	ELECT 1 20% 50V
C136	1-163-033-00	s	CERAMIC 0.022 50V
C137	1-124-899-11	s	ELECT 22 20% 25V
C141	1-163-033-00	s	CERAMIC 0.022 50V
C203	1-163-033-00	s	CERAMIC 0.022 50V
C213	1-123-369-00	s	ELECT 4.7 20% 25V
C214	1-163-033-00	s	CERAMIC 0.022 50V
C215	1-163-135-00	s	CERAMIC 560pF 5% 50V
C216	1-124-499-11	s	ELECT 1 20% 50V
C219	1-163-033-00	s	CERAMIC 0.022 50V
C230	1-123-369-00	s	ELECT 4.7 20% 25V
C231	1-163-135-00	s	CERAMIC 560pF 5% 50V
C232	1-124-499-11	s	ELECT 1 20% 50V
C235	1-124-899-11	s	ELECT 22 20% 25V
C237	1-163-033-00	s	CERAMIC 0.022 50V
C302	1-163-033-00	s	CERAMIC 0.022 50V
C304	1-163-033-00	s	CERAMIC 0.022 50V
C311	1-163-033-00	s	CERAMIC 0.022 50V
C313	1-163-033-00	s	CERAMIC 0.022 50V
C316	1-124-638-11	s	ELECT 22 20% 10V
C323	1-124-899-11	s	ELECT 22 20% 25V
C402	1-163-033-00	s	CERAMIC 0.022 50V
C404	1-163-033-00	s	CERAMIC 0.022 50V
C411	1-163-033-00	s	CERAMIC 0.022 50V
C413	1-163-033-00	s	CERAMIC 0.022 50V
C416	1-124-638-11	s	ELECT 22 20% 10V
C423	1-124-899-11	s	ELECT 22 20% 25V
C515	1-163-033-00	s	CERAMIC 0.022 50V
C701	1-126-103-11	s	ELECT 470 20% 16V
C702	1-163-033-00	s	CERAMIC 0.022 50V
C706	1-126-103-11	s	ELECT 470 20% 16V
C707	1-124-252-00	s	ELECT 0.33 20% 50V
C708	1-126-103-11	s	ELECT 470 20% 16V
C709	1-163-033-00	s	CERAMIC 0.022 50V
C713	1-126-103-11	s	ELECT 470 20% 16V
C714	1-124-252-00	s	ELECT 0.33 20% 50V
C725	1-163-033-00	s	CERAMIC 0.022 50V
C728	1-163-033-00	s	CERAMIC 0.022 50V
C729	1-163-033-00	s	CERAMIC 0.022 50V
C902	1-124-899-11	s	ELECT 22 20% 25V
C903	1-124-899-11	s	ELECT 22 20% 25V
C904	1-124-899-11	s	ELECT 22 20% 25V
C905	1-124-899-11	s	ELECT 22 20% 25V
C907	1-102-106-00	s	CERAMIC 100pF 10% 50V
C908	1-102-106-00	s	CERAMIC 100pF 10% 50V
5) CN202	1-506-748-31	s	DIN 96P
6) CN202	1-506-748-11	s	DIN 96P

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
D101	8-719-101-23	s	1SS123
D102	8-719-101-23	s	1SS123
D201	8-719-101-23	s	1SS123
D202	8-719-101-23	s	1SS123
D901	8-719-100-03	s	1S2835
D902	8-719-100-03	s	1S2835
FL1	1-236-590-11	s	LOW-PASS 1.0MHz
FL2	1-236-590-11	s	LOW-PASS 1.0MHz
FL3	1-236-012-11	s	BANDPASS 310kHz
FL4	1-236-013-11	s	BANDPASS 540kHz
FL5	1-236-013-11	s	BANDPASS 540kHz
FL6	1-236-012-11	s	BANDPASS 310kHz
IC1	8-759-403-78	s	AN3920K (MATSUSHITA)
IC2	8-759-403-78	s	AN3920K (MATSUSHITA)
IC101	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC102	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC103	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC104	8-759-700-84	s	NJM2041M-D (JRC)
IC201	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC202	8-759-403-77	s	AN3922NK (MATSUSHITA)
IC303	8-759-700-84	s	NJM2041M-D (JRC)
IC304	8-759-700-94	s	NJM5532M (JRC)
IC403	8-759-700-84	s	NJM2041M-D (JRC)
IC404	8-759-700-94	s	NJM5532M (JRC)
IC501	8-752-009-90	s	CX20099 (SONY)
IC701	8-759-200-68	s	TC4011BF (TOSHIBA)
IC702	8-759-200-78	s	TC4030BF (TOSHIBA)
IC703	8-759-205-78	s	TC504013BF (TOSHIBA)
IC704	8-759-200-90	s	TC4538BF (TOSHIBA)
IC705	8-759-200-90	s	TC4538BF (TOSHIBA)
IC706	8-759-200-67	s	TC4001BF (TOSHIBA)
IC707	8-759-200-68	s	TC4011BF (TOSHIBA)
IC708	8-759-278-06	s	TA78L006AP (TOSHIBA)
25) IC710	8-759-604-29	s	M5F7805 (MITSUBISHI)
26) IC710	8-759-982-05	s	RC7805FA (RAYTHEON)
L1	1-410-482-31	s	MICRO 100
L2	1-410-482-31	s	MICRO 100
L3	1-410-482-31	s	MICRO 100
L4	1-410-482-31	s	MICRO 100
L101	1-410-482-31	s	MICRO 100
L102	1-410-064-11	s	MICRO 2.7MMH
L103	1-410-064-11	s	MICRO 2.7MMH
L104	1-410-482-31	s	MICRO 100
L201	1-410-482-31	s	MICRO 100
L202	1-410-064-11	s	MICRO 2.7MMH
L203	1-410-064-11	s	MICRO 2.7MMH
L701	1-459-155-00	s	45 (WITH CORE)
L702	1-459-155-00	s	45 (WITH CORE)
Q1	8-729-271-22	s	2SC2712-G
Q2	8-729-271-22	s	2SC2712-G
Q3	8-729-271-22	s	2SC2712-G
Q4	8-729-271-22	s	2SC2712-G
Q304	8-769-401-89	s	TX429M

Ref.No.	Parts No.	SP	Description
Q404	8-769-401-89	s	TX429M
Q701	8-729-177-33	s	2SD773-4
Q702	8-729-113-33	s	2SB733-4
Q705	8-729-901-05	s	DTA124EK
Q706	8-729-901-05	s	DTA124EK
Q707	8-729-901-05	s	DTA124EK
Q901	8-729-271-22	s	2SC2712-G
Q902	8-729-271-22	s	2SC2712-G
Q903	8-729-202-38	s	2SC3326N
Q904	8-729-202-38	s	2SC3326N
R3	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R4	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R8	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R9	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R12	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R13	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R15	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R16	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R17	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R18	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R20	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R21	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R23	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R24	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R25	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R26	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
R101	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R103	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R108	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R110	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R115	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R116	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R120	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R121	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R201	1-216-670-11	s	METAL CHIP 6.2k 0.50% 1/10W
R203	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R208	1-216-670-11	s	METAL CHIP 6.2k 0.50% 1/10W
R210	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R214	1-249-393-11	s	CARBON 10 5% 1/4W
R215	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R216	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R220	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R221	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R314	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R323	1-216-664-11	s	METAL CHIP 3.6k 0.50% 1/10W
R324	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R414	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
R423	1-216-664-11	s	METAL CHIP 3.6k 0.50% 1/10W
R424	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R501	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R504	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R505	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
R506	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R508	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R509	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R511	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R512	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R513	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R515	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R519	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W

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Ref.No.	Parts No.	SP	Description			
R520	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W	
R521	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W	
R522	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W	
R523	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W	
R524	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W	
R525	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W	
R526	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W	
R527	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W	
R707	1-216-692-11	s	METAL CHIP 51k	0.50%	1/10W	
R708	1-216-692-11	s	METAL CHIP 51k	0.50%	1/10W	
R709	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W	
R718	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W	
R719	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W	
R721	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W	
RV2	1-237-520-21	s	VAR, CERMET	50k		
RV4	1-237-520-21	s	VAR, CERMET	50k		
RV5	1-237-519-21	s	VAR, CERMET	20k		
RV6	1-237-519-21	s	VAR, CERMET	20k		
RV101	1-237-516-21	s	VAR, CERMET	2k		
RV102	1-237-517-21	s	VAR, CERMET	5k		
RV103	1-237-516-21	s	VAR, CERMET	2k		
RV105	1-237-519-21	s	VAR, CERMET	20k		
RV201	1-237-516-21	s	VAR, CERMET	2k		
RV202	1-237-517-21	s	VAR, CERMET	5k		
RV203	1-237-516-21	s	VAR, CERMET	2k		
RV205	1-237-519-21	s	VAR, CERMET	20k		
S1	1-570-857-11	s	SLIDE			

AU-118P BOARD

	A-6713-330-B	o	MOUNTED CIRCUIT BOARD, AU-118P			
C1	1-126-103-11	s	ELECT	470	20%	16V
C2	1-126-103-11	s	ELECT	470	20%	16V
C5	1-126-103-11	s	ELECT	470	20%	16V
C6	1-126-103-11	s	ELECT	470	20%	16V
C7	1-127-503-00	s	ELECT	0.33		25V
C8	1-127-503-00	s	ELECT	0.33		25V
C9	1-127-503-00	s	ELECT	0.33		25V
C10	1-127-503-00	s	ELECT	0.33		25V
C23	1-124-236-00	s	ELECT	47	20%	16V
C24	1-124-236-00	s	ELECT	47	20%	16V
C112	1-124-598-11	s	ELECT	22	20%	25V
C113	1-124-462-00	s	ELECT	10	20%	16V
C117	1-124-462-00	s	ELECT	10	20%	16V
C119	1-124-236-00	s	ELECT	47	20%	16V
C120	1-124-236-00	s	ELECT	47	20%	16V
C124	1-124-236-00	s	ELECT	47	20%	16V
C132	1-124-462-00	s	ELECT	10	20%	16V
C151	1-124-462-00	s	ELECT	10	20%	16V
C155	1-124-234-00	s	ELECT	22	20%	16V
C157	1-124-234-00	s	ELECT	22	20%	16V
C158	1-124-234-00	s	ELECT	22	20%	16V
6) C164	1-162-889-11	s	CERAMIC	680pF	5%	50V
C174	1-124-234-00	s	ELECT	22	20%	16V
C179	1-124-234-00	s	ELECT	22	20%	16V
C212	1-124-598-11	s	ELECT	22	20%	25V

Ref.No.	Parts No.	SP	Description			
C213	1-124-462-00	s	ELECT	10	20%	16V
C217	1-124-462-00	s	ELECT	10	20%	16V
C219	1-124-236-00	s	ELECT	47	20%	16V
C220	1-124-236-00	s	ELECT	47	20%	16V
C224	1-124-236-00	s	ELECT	47	20%	16V
C232	1-124-462-00	s	ELECT	10	20%	16V
C251	1-124-462-00	s	ELECT	10	20%	16V
C255	1-124-234-00	s	ELECT	22	20%	16V
C257	1-124-234-00	s	ELECT	22	20%	16V
C258	1-124-234-00	s	ELECT	22	20%	16V
6) C264	1-162-889-11	s	CERAMIC	680pF	5%	50V
C274	1-124-234-00	s	ELECT	22	20%	16V
5) CN204	1-506-748-31	s	DIN 96P			
6) CN204	1-506-748-11	s	DIN 96P			
D1	8-719-200-02	s	10E2			
D2	8-719-200-02	s	10E2			
D303	8-719-100-05	s	1S2837			
FL101	1-236-003-11	s	LOW-PASS 15kHz			
IC1	8-759-708-05	s	NJM78L05A (JRC)			
IC2	8-759-700-65	s	NJM79L05A (JRC)			
IC101	8-759-145-58	s	NJM2043M-D (JRC)			
IC102	8-759-145-58	s	uPC4558C (NEC)			
IC103	8-741-115-20	s	BX1152 (SONY)			
IC104	8-759-700-94	s	NJM5532M (JRC)			
IC105	8-759-145-58	s	uPC4558C (NEC)			
IC106	8-759-700-09	s	NJM2043M-D (JRC)			
IC201	8-759-145-58	s	uPC4558C (NEC)			
IC202	8-759-145-58	s	uPC4558C (NEC)			
IC203	8-741-115-20	s	BX1152 (SONY)			
IC204	8-759-700-94	s	NJM5532M (JRC)			
IC205	8-759-145-58	s	uPC4558 (NEC)			
IC206	8-759-700-09	s	NJM2043M-D (JRC)			
L3	1-459-155-00	s	45 (WITH CORE)			
LV101	1-459-434-00	s	VAR 22MMH			
LV201	1-459-434-00	s	VAR 22MMH			
Q1	8-729-216-21	s	2SA1162-Y			
Q2	8-729-901-01	s	DTC144EK			
Q3	8-729-905-53	s	2SD1055-R			
Q4	8-729-982-22	s	2SB822			
Q5	8-729-901-01	s	DTC144EK			
Q6	8-729-901-06	s	DTA144EK			
Q104	8-729-202-38	s	2SC3326N			
Q115	8-729-202-38	s	2SC3326N			
Q116	8-729-202-38	s	2SC3326N			
Q117	8-729-202-38	s	2SC3326N			
Q118	8-729-220-91	s	2SK209-Y			
Q119	8-729-901-01	s	DTC144EK			
Q120	8-729-202-38	s	2SC3326N			
Q204	8-729-202-38	s	2SC3326N			
Q215	8-729-202-38	s	2SC3326N			

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Ref.No.	Parts No.	SP	Description
Q216	8-729-202-38	s	2SC3326N
Q217	8-729-202-38	s	2SC3326N
Q218	8-729-220-91	s	2SK209-Y
Q219	8-729-901-01	s	DTC144EK
Q220	8-729-202-38	s	2SC3326N
Q309	8-729-901-06	s	DTA144EK
Q310	8-729-901-06	s	DTA144EK
Q311	8-729-901-06	s	DTA144EK

R113	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R114	1-216-678-11	s	METAL CHIP 13k	0.50%	1/10W
R144	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R145	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R146	1-216-697-11	s	METAL CHIP 82k	0.50%	1/10W
R148	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R150	1-216-684-11	s	METAL CHIP 24k	0.50%	1/10W
R152	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R153	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R157	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
1) R166	1-216-697-11	s	METAL CHIP 82k	0.50%	1/10W
2) R166	1-216-698-11	s	METAL CHIP 91k	0.50%	1/10W
R167	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
R168	1-216-633-11	s	METAL CHIP 180	0.50%	1/10W
R183	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R185	1-216-699-11	s	METAL CHIP 100k	0.50%	1/10W
R188	1-216-694-11	s	METAL CHIP 62k	0.50%	1/10W
R190	1-216-658-11	s	METAL CHIP 2.0k	0.50%	1/10W
R191	1-216-294-00	s	METAL CHIP 10M	5%	1/8W
R192	1-216-294-00	s	METAL CHIP 10M	5%	1/8W
R194	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R213	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R244	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R245	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R246	1-216-697-11	s	METAL CHIP 82k	0.50%	1/10W
R248	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R250	1-216-693-11	s	METAL CHIP 56k	0.50%	1/10W
1) R252	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
2) R252	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R253	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
1) R255	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
2) R255	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R257	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R266	1-216-698-11	s	METAL CHIP 91k	0.50%	1/10W
R267	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
R268	1-216-633-11	s	METAL CHIP 180	0.50%	1/10W
R283	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R285	1-216-699-11	s	METAL CHIP 100k	0.50%	1/10W
R290	1-216-658-11	s	METAL CHIP 2k	0.50%	1/10W
R291	1-216-294-00	s	METAL CHIP 10M	5%	1/8W
R292	1-216-294-00	s	METAL CHIP 10M	5%	1/8W
R294	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W

RV110	1-237-522-21	s	VAR, CERMET	200k
RV111	1-237-517-21	s	VAR, CERMET	5k
RV112	1-237-518-21	s	VAR, CERMET	10k
RV113	1-237-517-21	s	VAR, CERMET	5k
RV114	1-237-514-21	s	VAR, CERMET	500
RV210	1-237-522-21	s	VAR, CERMET	200k
RV211	1-237-517-21	s	VAR, CERMET	5k
RV212	1-237-518-21	s	VAR, CERMET	10k
RV213	1-237-517-21	s	VAR, CERMET	5k
RV214	1-237-514-21	s	VAR, CERMET	500

Ref.No.	Parts No.	SP	Description
S101	1-570-598-11	s	DIP
S202	1-570-598-11	s	DIP
SP101	1-564-947-11	s	PIN, SHORT
SP201	1-564-947-11	s	PIN, SHORT

BF-28A BOARD

	A-6713-916-A	o	MOUNTED CIRCUIT BOARD, BF-28A			
C101	1-124-236-00	s	ELECT	47	20%	10V
C102	1-124-236-00	s	ELECT	47	20%	10V
C201	1-124-236-00	s	ELECT	47	20%	10V
C202	1-124-236-00	s	ELECT	47	20%	10V
C301	1-124-236-00	s	ELECT	47	20%	10V
C302	1-124-236-00	s	ELECT	47	20%	10V
C401	1-124-236-00	s	ELECT	47	20%	10V
C402	1-124-236-00	s	ELECT	47	20%	10V
C501	1-124-462-00	s	ELECT	10	20%	16V
C502	1-131-349-00	s	TANTAL	2.2	10%	35V
C505	1-124-462-00	s	ELECT	10	20%	16V
C506	1-135-100-21	s	TANTAL	6.8	20%	6.3V
C601	1-124-462-00	s	ELECT	10	20%	16V
C605	1-124-462-00	s	ELECT	10	20%	16V
C606	1-135-100-21	s	TANTAL	6.8	20%	6.3V
C701	1-124-462-00	s	ELECT	10	20%	16V
C705	1-124-462-00	s	ELECT	10	20%	16V
C706	1-135-100-21	s	TANTAL	6.8	20%	6.3V
C801	1-124-462-00	s	ELECT	10	20%	16V
C805	1-124-462-00	s	ELECT	10	20%	16V
C806	1-135-100-21	s	TANTAL	6.8	20%	6.3V
C901	1-124-236-00	s	ELECT	47	20%	10V
C902	1-124-236-00	s	ELECT	47	20%	10V
C903	1-124-229-00	s	ELECT	33	20%	6.3V
C904	1-124-229-00	s	ELECT	33	20%	6.3V
C905	1-124-229-00	s	ELECT	33	20%	6.3V
C906	1-124-229-00	s	ELECT	33	20%	6.3V

D501	8-719-101-23	s	1SS123
D502	8-719-101-23	s	1SS123
D503	8-719-100-05	s	1S2837
D505	8-719-101-23	s	1SS123
D506	8-719-101-23	s	1SS123
D601	8-719-101-23	s	1SS123
D602	8-719-101-23	s	1SS123
D603	8-719-100-05	s	1S2837
D605	8-719-101-23	s	1SS123
D606	8-719-101-23	s	1SS123
D701	8-719-101-23	s	1SS123
D702	8-719-101-23	s	1SS123
D703	8-719-100-05	s	1S2837
D705	8-719-101-23	s	1SS123
D706	8-719-101-23	s	1SS123
D801	8-719-101-23	s	1SS123
D802	8-719-101-23	s	1SS123
D803	8-719-100-05	s	1S2837
D805	8-719-101-23	s	1SS123
D806	8-719-101-23	s	1SS123

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
D901	8-719-100-03	s	1S2835
D902	8-719-101-23	s	1SS123
IC101	8-759-700-84	s	NJM2041M-D (JRC)
IC201	8-759-700-84	s	NJM2041M-D (JRC)
IC301	8-759-700-84	s	NJM2041M-D (JRC)
IC401	8-759-700-84	s	NJM2041M-D (JRC)
IC501	8-759-981-54	s	RC2041MD (RAYTHEON)
IC502	8-759-981-54	s	RC2041MD (RAYTHEON)
IC503	8-759-745-64	s	NJM4560M (JRC)
IC601	8-759-981-54	s	RC2041MD (RAYTHEON)
IC602	8-759-981-54	s	RC2041MD (RAYTHEON)
IC701	8-759-981-54	s	RC2041MD (RAYTHEON)
IC702	8-759-981-54	s	RC2041MD (RAYTHEON)
IC703	8-759-745-64	s	NJM4560M (JRC)
IC801	8-759-981-54	s	RC2041MD (RAYTHEON)
IC802	8-759-981-54	s	RC2041MD (RAYTHEON)
IC901	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC902	8-759-700-84	s	NJM2041M-D (JRC)
IC903	8-759-200-78	s	TC4030BF (TOSHIBA)
IC904	8-759-745-64	s	NJM4560M (JRC)
Q501	8-729-202-38	s	2SC3326N
Q601	8-729-202-38	s	2SC3326N
Q701	8-729-202-38	s	2SC3326N
Q801	8-729-202-38	s	2SC3326N
Q901	8-729-905-53	s	2SD1055-R
Q902	8-729-982-22	s	2SB822
Q903	8-729-625-91	s	2SC2259
R503	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R504	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R505	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R506	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R507	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R509	1-216-693-11	s	METAL CHIP 56k 0.50% 1/10W
R510	1-216-748-11	s	METAL 39k 5% 1/10W
R512	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R513	1-216-689-11	s	METAL CHIP 39k 0.50% 1/10W
R516	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R521	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R522	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R603	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R604	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R605	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R606	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R607	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R609	1-216-693-11	s	METAL CHIP 56k 0.50% 1/10W
R610	1-216-748-11	s	METAL 39k 5% 1/10W
R612	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R613	1-216-689-11	s	METAL CHIP 39k 0.50% 1/10W
R616	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R621	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R622	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R703	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R704	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R705	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R706	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R707	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R709	1-216-693-11	s	METAL CHIP 56k 0.50% 1/10W

Ref.No.	Parts No.	SP	Description
R710	1-216-748-11	s	METAL 39k 5% 1/10W
R712	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R713	1-216-689-11	s	METAL CHIP 39k 0.50% 1/10W
R716	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R721	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R722	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R803	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R804	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R805	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R806	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R807	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R809	1-216-693-11	s	METAL CHIP 56k 0.50% 1/10W
R810	1-216-748-11	s	METAL 39k 5% 1/10W
R812	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R813	1-216-689-11	s	METAL CHIP 39k 0.50% 1/10W
R816	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
R821	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R822	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R921	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R922	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R923	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
R924	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R925	1-216-686-11	s	METAL CHIP 30k 0.50% 1/10W
RV102	1-237-502-21	s	VAR, CERMET 5k
RV202	1-237-502-21	s	VAR, CERMET 5k
RV302	1-237-502-21	s	VAR, CERMET 5k
RV402	1-237-502-21	s	VAR, CERMET 5k
RV501	1-237-518-21	s	VAR, CERMET 10k
RV601	1-237-518-21	s	VAR, CERMET 10k
RV701	1-237-518-21	s	VAR, CERMET 10k
RV801	1-237-518-21	s	VAR, CERMET 10k
RV901	1-237-519-21	s	VAR, CERMET 20k
RV902	1-237-517-21	s	VAR, CERMET 5k
RV903	1-237-518-21	s	VAR, CERMET 10k

CCM-2 BOARD

	1-623-198-11	o	PRINTED CIRCUIT BOARD, CCM-2
M008	1-541-376-11	s	MOTOR, DC (DNR-4700A)

CL-14 BOARD

	1-622-602-11	o	PRINTED CIRCUIT BOARD, CL-14
CN332	1-563-969-11	o	7P

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Ref.No.	Parts No.	SP	Description
CL-24 BOARD			
	A-6724-835-A	s	MOUNTED CIRCUIT BOARD, CL-24
	1-635-029-11	o	PRINTED CIRCUIT BOARD, CL-24
D1	8-719-820-27	s	TLY256
D2	8-719-820-27	s	TLY256
D3	8-719-820-27	s	TLY256
D4	8-719-820-27	s	TLY256
D5	8-719-820-27	s	TLY256
D6	8-719-820-27	s	TLY256
R1	1-247-702-11	s	CARBON 150 5% 1/4W
R2	1-247-702-11	s	CARBON 150 5% 1/4W
R3	1-247-702-11	s	CARBON 150 5% 1/4W
CP-101AP BOARD			
	A-6729-737-A	o	MOUNTED CIRCUIT BOARD, CP-101AP
C4	1-124-584-00	s	ELECT 100 20% 10V
C8	1-124-584-00	s	ELECT 100 20% 10V
C10	1-124-584-00	s	ELECT 100 20% 10V
C52	1-124-584-00	s	ELECT 100 20% 10V
C54	1-124-584-00	s	ELECT 100 20% 10V
FB3	1-535-178-00	s	FERRITE BEAD
FB4	1-535-178-00	s	FERRITE BEAD
FB6	1-535-178-00	s	FERRITE BEAD
IC2	8-752-015-81	s	CX20158 (SONY)
L1	1-410-482-31	s	MICRO 100
L2	1-410-482-31	s	MICRO 100
S2	1-570-157-51	s	SLIDE
CP-103AP BOARD			
	A-6717-486-A	o	MOUNTED CIRCUIT BOARD, CP-103AP
C1	1-124-234-00	s	ELECT 22 20% 16V
C3	1-124-234-00	s	ELECT 22 20% 16V
CN501	1-559-264-11	o	WIRE ASS'Y, FLAT TYPE (30 CORE)

Ref.No.	Parts No.	SP	Description
IC1	8-759-208-11	s	TC4053BFHB (TOSHIBA)
L1	1-410-470-31	s	MICRO 10
L2	1-410-470-31	s	MICRO 10
Q1	8-729-901-05	s	DTC124EK
RV1	1-237-696-11	s	VAR, CARBON 5k
RV2	1-237-696-11	s	VAR, CARBON 5k
RV3	1-237-696-11	s	VAR, CARBON 5k
RV4	1-237-695-11	s	VAR, CARBON 5k
RV6	1-237-696-11	s	VAR, CARBON 5k
RV7	1-237-695-11	s	VAR, CARBON 5k
RV8	1-237-696-11	s	VAR, CARBON 5k
S1	1-570-157-51	s	SLIDE
S2	1-570-157-51	s	SLIDE
S3	1-570-157-51	s	SLIDE
S4	1-570-157-51	s	SLIDE
S6	1-571-061-11	s	SLIDE
S9	1-570-157-51	s	SLIDE
S10	1-570-157-51	s	SLIDE
S15	1-554-949-11	s	SLIDE
CP-111 BOARD			
	This board includes the CP-113 board.		
	A-6713-274-A	o	MOUNTED CIRCUIT BOARD, CP-111
	1-561-832-00	s	SOCKET, SHORT
C20	1-136-153-00	s	MYLAR 0.01 10% 50V
C21	1-126-157-11	s	ELECT 10 20% 16V
C36	1-124-462-00	s	ELECT 10 20% 16V
C42	1-124-236-00	s	ELECT 47 20% 16V
C43	1-124-236-00	s	ELECT 47 20% 16V
C158	1-124-462-00	s	ELECT 10 20% 16V
C159	1-124-462-00	s	ELECT 10 20% 16V
C160	1-124-462-00	s	ELECT 10 20% 16V
C161	1-124-462-00	s	ELECT 10 20% 16V
C162	1-126-103-11	s	ELECT 470 20% 16V
C163	1-126-103-11	s	ELECT 470 20% 16V
C258	1-124-462-00	s	ELECT 10 20% 16V
C259	1-124-462-00	s	ELECT 10 20% 16V
C260	1-124-462-00	s	ELECT 10 20% 16V
C261	1-124-462-00	s	ELECT 10 20% 16V
C262	1-126-103-11	s	ELECT 470 20% 16V
C263	1-126-103-11	s	ELECT 470 20% 16V
C264	1-126-103-11	s	ELECT 470 20% 16V
C265	1-126-103-11	s	ELECT 470 20% 16V
C266	1-102-106-00	s	CERAMIC 100pF 10% 50V

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Ref.No.	Parts No.	SP	Description			
C267	1-126-103-11	s	ELECT	470	20%	16V
C268	1-136-161-00	s	MYLAR	0.047	10%	50V
C269	1-126-103-11	s	ELECT	470	20%	16V
C270	1-136-161-00	s	MYLAR	0.047	10%	50V
C271	1-102-106-00	s	CERAMIC	100pF	10%	50V
C273	1-124-462-00	s	ELECT	10	20%	16V
C358	1-124-462-00	s	ELECT	10	20%	16V
C359	1-124-462-00	s	ELECT	10	20%	16V
C360	1-124-462-00	s	ELECT	10	20%	16V
C361	1-124-462-00	s	ELECT	10	20%	16V
C362	1-126-103-11	s	ELECT	470	20%	16V
C363	1-126-103-11	s	ELECT	470	20%	16V
C458	1-124-462-00	s	ELECT	10	20%	16V
C459	1-124-462-00	s	ELECT	10	20%	16V
C460	1-124-462-00	s	ELECT	10	20%	16V
C461	1-124-462-00	s	ELECT	10	20%	16V
C462	1-126-103-11	s	ELECT	470	20%	16V
C463	1-126-103-11	s	ELECT	470	20%	16V
C464	1-126-103-11	s	ELECT	470	20%	16V
C658	1-124-462-00	s	ELECT	10	20%	16V
C659	1-124-462-00	s	ELECT	10	20%	16V
C660	1-124-462-00	s	ELECT	10	20%	16V
C661	1-124-462-00	s	ELECT	10	20%	16V
C662	1-126-103-11	s	ELECT	470	20%	16V
C663	1-126-103-11	s	ELECT	470	20%	16V
C664	1-126-103-11	s	ELECT	470	20%	16V
C665	1-126-103-11	s	ELECT	470	20%	16V
C666	1-102-106-00	s	CERAMIC	100pF	10%	50V
C667	1-126-103-11	s	ELECT	470	20%	16V
C668	1-136-161-00	s	MYLAR	0.047	10%	50V
C669	1-126-103-11	s	ELECT	470	20%	16V
C670	1-136-161-00	s	MYLAR	0.047	10%	50V
C671	1-102-106-00	s	CERAMIC	100pF	10%	50V

D1	8-719-100-43	s	RD7.5
D2	8-719-100-43	s	RD7.5
D3	8-719-100-43	s	RD7.5
D151	8-719-921-11	s	HZ2ALL
D152	8-719-911-19	s	1SS119
D153	8-719-911-19	s	1SS119
D154	8-719-921-11	s	HZ2ALL
D155	8-719-921-11	s	HZ2ALL
D156	8-719-911-19	s	1SS119
D157	8-719-911-19	s	1SS119
D158	8-719-921-11	s	HZ2ALL
D251	8-719-921-11	s	HZ2ALL
D252	8-719-911-19	s	1SS119
D253	8-719-911-19	s	1SS119
D254	8-719-921-11	s	HZ2ALL
D255	8-719-921-11	s	HZ2ALL
D256	8-719-911-19	s	1SS119
D257	8-719-911-19	s	1SS119
D258	8-719-921-11	s	HZ2ALL
D259	8-719-200-02	s	10E2
D260	8-719-200-02	s	10E2
D351	8-719-921-11	s	HZ2ALL
D352	8-719-911-19	s	1SS119
D353	8-719-911-19	s	1SS119
D354	8-719-921-11	s	HZ2ALL
D355	8-719-921-11	s	HZ2ALL
D356	8-719-911-19	s	1SS119
D357	8-719-911-19	s	1SS119
D358	8-719-921-11	s	HZ2ALL
D451	8-719-921-11	s	HZ2ALL

Ref.No.	Parts No.	SP	Description
D452	8-719-911-19	s	1SS119
D453	8-719-911-19	s	1SS119
D454	8-719-921-11	s	HZ2ALL
D455	8-719-921-11	s	HZ2ALL
D456	8-719-911-19	s	1SS119
D457	8-719-911-19	s	1SS119
D458	8-719-921-11	s	HZ2ALL
D551	8-719-921-11	s	HZ2ALL
D552	8-719-911-19	s	1SS119
D553	8-719-911-19	s	1SS119
D554	8-719-921-11	s	HZ2ALL
D555	8-719-921-11	s	HZ2ALL
D556	8-719-911-19	s	1SS119
D557	8-719-911-19	s	1SS119
D558	8-719-921-11	s	HZ2ALL
D651	8-719-921-11	s	HZ2ALL
D652	8-719-911-19	s	1SS119
D653	8-719-911-19	s	1SS119
D654	8-719-921-11	s	HZ2ALL
D655	8-719-921-11	s	HZ2ALL
D656	8-719-911-19	s	1SS119
D657	8-719-911-19	s	1SS119
D658	8-719-921-11	s	HZ2ALL

IC31	8-759-745-61	s	NJM4560D-D (JRC)
IC32	8-759-208-12	s	TC4016BPHB (TOSHIBA)
IC33	8-759-745-61	s	NJM4560D-D (JRC)
IC34	8-759-745-61	s	NJM4560D-D (JRC)
IC35	8-759-745-61	s	NJM4560D-D (JRC)
IC36	8-759-208-12	s	TC4016BPHB (TOSHIBA)
IC37	8-759-700-04	s	NJM2043D-D (JRC)
IC38	8-759-208-12	s	TC4016BPHB (TOSHIBA)
IC39	8-759-700-04	s	NJM2043D-D (JRC)
IC40	8-759-700-04	s	NJM2043D-D (JRC)
IC41	8-759-208-12	s	TC4016BPHB (TOSHIBA)
IC42	8-759-982-21	s	RC78L05A (RAYTHEON)

Q31	8-729-900-30	s	DTA144EF
Q32	8-729-201-05	s	2SC2878-B
Q33	8-729-900-30	s	DTA144EF
Q34	8-720-002-92	s	TX429M
Q35	8-729-900-33	s	DTC144EF
Q36	8-729-900-33	s	DTC144EF
Q37	8-729-900-30	s	DTA144EF
Q38	8-729-900-33	s	DTC144EF
Q155	8-729-306-92	s	2SD669A*(29)
Q156	8-729-304-92	s	2SB649A*(29)
Q157	8-729-306-92	s	2SD669A*(29)
Q158	8-729-304-92	s	2SB649A*(29)
Q255	8-729-306-92	s	2SD669A*(29)
Q256	8-729-364-92	s	2SB649A*(29)
Q257	8-729-306-92	s	2SD669A*(29)
Q258	8-729-304-92	s	2SB649A*(29)
Q259	8-729-905-53	s	2SD1055-R
Q260	8-729-982-22	s	2SB822
Q261	8-729-117-54	s	2SA1175
Q355	8-729-306-92	s	2SD669A*(29)
Q356	8-729-304-92	s	2SB649A*(29)
Q357	8-729-306-92	s	2SD669A*(29)
Q358	8-729-304-92	s	2SB649A*(29)
Q455	8-729-306-92	s	2SD669A*(29)
Q456	8-729-304-92	s	2SB649A*(29)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
Q457	8-729-306-92	s	2SD669A*(29)
Q458	8-729-304-92	s	2SB649A*(29)
Q459	8-729-905-53	s	2SD1055-R
Q460	8-729-982-22	s	2SB822
Q555	8-729-306-92	s	2SD669A*(29)
Q556	8-729-304-92	s	2SB649A*(29)
Q557	8-729-306-92	s	2SD669A*(29)
Q558	8-729-304-92	s	2SB649A*(29)
Q457	8-729-306-92	s	2SD669A*(29)
Q458	8-729-304-92	s	2SB649A*(29)
Q459	8-729-905-53	s	2SD1055-R
Q460	8-729-982-22	s	2SB822
Q555	8-729-306-92	s	2SD669A*(29)
Q556	8-729-304-92	s	2SB649A*(29)
Q557	8-729-306-92	s	2SD669A*(29)
Q558	8-729-304-92	s	2SB649A*(29)
Q655	8-729-306-92	s	2SD669A*(29)
Q656	8-729-304-92	s	2SB649A*(29)
Q657	8-729-306-92	s	2SD669A*(29)
Q658	8-729-304-92	s	2SB649A*(29)
Q659	8-729-905-53	s	2SD1055-R
Q660	8-729-982-22	s	2SB822
R39	1-247-887-00	s	CARBON 220k 5% 1/4W
R40	1-247-887-00	s	CARBON 220k 5% 1/4W
R41	1-247-887-00	s	CARBON 220k 5% 1/4W
R42	1-247-887-00	s	CARBON 220k 5% 1/4W
R43	1-247-887-00	s	CARBON 220k 5% 1/4W
R44	1-247-887-00	s	CARBON 220k 5% 1/4W
R48	1-247-887-00	s	CARBON 220k 5% 1/4W
R49	1-247-887-00	s	CARBON 220k 5% 1/4W
R53	1-247-887-00	s	CARBON 220k 5% 1/4W
R54	1-247-887-00	s	CARBON 220k 5% 1/4W
R55	1-247-887-00	s	CARBON 220k 5% 1/4W
R57	1-247-887-00	s	CARBON 220k 5% 1/4W
R58	1-247-887-00	s	CARBON 220k 5% 1/4W
R68	1-247-887-00	s	CARBON 220k 5% 1/4W
R173	1-247-731-11	s	CARBON 22 5% 1/2W
R174	1-247-731-11	s	CARBON 22 5% 1/2W
R175	1-247-731-11	s	CARBON 22 5% 1/2W
R176	1-247-731-11	s	CARBON 22 5% 1/2W
R177	1-249-455-11	s	CARBON 4.7 5% 1/4W
R179	1-249-455-11	s	CARBON 4.7 5% 1/4W
R273	1-247-731-11	s	CARBON 22 5% 1/2W
R274	1-247-731-11	s	CARBON 22 5% 1/2W
R275	1-247-731-11	s	CARBON 22 5% 1/2W
R276	1-247-731-11	s	CARBON 22 5% 1/2W
R277	1-249-455-11	s	CARBON 4.7 5% 1/4W
R279	1-249-455-11	s	CARBON 4.7 5% 1/4W
R284	1-247-745-11	s	CARBON 330 5% 1/2W
R285	1-247-745-11	s	CARBON 330 5% 1/2W
R373	1-247-731-11	s	CARBON 22 5% 1/2W
R374	1-247-731-11	s	CARBON 22 5% 1/2W
R375	1-247-731-11	s	CARBON 22 5% 1/2W
R376	1-247-731-11	s	CARBON 22 5% 1/2W
R377	1-249-455-11	s	CARBON 4.7 5% 1/4W
R379	1-249-455-11	s	CARBON 4.7 5% 1/4W
R473	1-247-731-11	s	CARBON 22 5% 1/2W
R474	1-247-731-11	s	CARBON 22 5% 1/2W
R475	1-247-731-11	s	CARBON 22 5% 1/2W
R476	1-247-731-11	s	CARBON 22 5% 1/2W
R477	1-249-455-11	s	CARBON 4.7 5% 1/4W
R479	1-249-455-11	s	CARBON 4.7 5% 1/4W

Ref.No.	Parts No.	SP	Description
R484	1-247-745-11	s	CARBON 330 5% 1/2W
R485	1-247-745-11	s	CARBON 330 5% 1/2W
R573	1-247-731-11	s	CARBON 22 5% 1/2W
R574	1-247-731-11	s	CARBON 22 5% 1/2W
R575	1-247-731-11	s	CARBON 22 5% 1/2W
R576	1-247-731-11	s	CARBON 22 5% 1/2W
R577	1-249-455-11	s	CARBON 4.7 5% 1/4W
R579	1-249-455-11	s	CARBON 4.7 5% 1/4W
R673	1-247-731-11	s	CARBON 22 5% 1/2W
R674	1-247-731-11	s	CARBON 22 5% 1/2W
R675	1-247-731-11	s	CARBON 22 5% 1/2W
R676	1-247-731-11	s	CARBON 22 5% 1/2W
R677	1-249-455-11	s	CARBON 4.7 5% 1/4W
R679	1-249-455-11	s	CARBON 4.7 5% 1/4W
R684	1-247-745-11	s	CARBON 330 5% 1/2W
R685	1-247-745-11	s	CARBON 330 5% 1/2W
RV151	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV251	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV351	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV451	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV551	1-230-522-11	s	VAR, METAL GLAZE 4.7k
RV651	1-230-522-11	s	VAR, METAL GLAZE 4.7k

CP-113 BOARD

All the component parts on the CP-113 board are supplied together when you order the CP-111 board.

	1-622-572-11	o	PRINTED CIRCUIT BOARD, CP-113
CN1	1-566-099-11	o	BOARD TO BOARD 15P
D51	8-719-101-23	s	1SS123
D53	8-719-101-23	s	1SS123
IC51	8-759-745-64	s	NJM4560M (JRC)
Q51	8-729-202-38	s	2SC3326N
Q52	8-729-202-38	s	2SC3326N
Q53	8-729-202-38	s	2SC3326N
Q54	8-729-202-38	s	2SC3326N
R54	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R56	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R57	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R58	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R60	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R62	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R78	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R81	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R82	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W

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E-15, DEC-39A/46AP

Ref.No.	Parts No.	SP	Description
DE-15 BOARD			
	1-622-606-12	o	PRINTED CIRCUIT BOARD, DE-15
	1-559-266-11	o	FLAT CABLE
DME	1-807-683-11	s	RESISTOR ELEMENT
14) **DEC-39A BOARD**			
	A-6711-942-A	o	MOUNTED CIRCUIT BOARD, DEC-39A
C410	1-124-462-00	s	ELECT 10 20% 16V
C853	1-123-661-00	s	ELECT 100 20% 6.3V
C855	1-123-661-00	s	ELECT 100 20% 6.3V
C873	1-163-100-00	s	CERMIC CHIP 20pF 5% 50V
5) CN105	1-506-748-31	s	DIN 96P
6) CN105	1-506-748-11	s	DIN 96P
D403	8-719-100-05	s	1S2837
IC403	8-759-700-20	s	NJM79M05A (JRC)
IC851	8-759-941-27	s	MB4002PF (FUJITSU)
IC852	8-759-941-27	s	MB4002PF (FUJITSU)
IC853	8-759-971-01	s	SN74HC08NS (TI)
L400	1-459-155-00	s	45 (WITH CORE)
L401	1-459-155-00	s	45 (WITH CORE)
L402	1-459-155-00	s	45 (WITH CORE)
L851	1-410-482-31	s	MICRO 100
L852	1-410-482-31	s	MICRO 100
L853	1-410-482-31	s	MICRO 100
L854	1-410-482-31	s	MICRO 100
Q851	8-729-200-85	s	2SC2714R
Q852	8-729-200-85	s	2SC2714R
Q853	8-729-200-85	s	2SC2714R
R855	1-216-637-11	s	METAL CHIP 270 0.50% 1/10W
R856	1-216-658-11	s	METAL CHIP 2k 0.50% 1/10W
R857	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R858	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R859	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R862	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R863	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R865	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
RV851	1-237-515-21	s	VAR, CERMET 1k
RV852	1-237-515-21	s	VAR, CERMET 1k

Ref.No.	Parts No.	SP	Description
15) **DEC-46AP BOARD**			
	A-6727-076-A	o	MOUNTED CIRCUIT BOARD, DEC-46AP
C48	1-126-103-11	s	ELECT 47 20% 16V
C49	1-126-103-11	s	ELECT 47 20% 16V
C50	1-126-103-11	s	ELECT 47 20% 16V
C58	1-126-157-11	s	ELECT 10 20% 16V
C201	1-123-661-00	s	ELECT 100 20% 6.3V
C203	1-124-589-11	s	ELECT 47 20% 16V
C205	1-123-661-00	s	ELECT 100 20% 6.3V
C208	1-163-100-00	s	CERAMIC CHIP 20pF 5% 50V
C209	1-126-157-11	s	ELECT 10 20% 16V
C211	1-124-589-11	s	ELECT 47 20% 16V
CN105	1-506-748-11	s	DIN 96P
D4	8-719-100-05	s	1S2837
IC11	8-759-982-52	s	RC79M05FA (RAYTHEON)
IC201	8-759-941-27	s	MB4002PF (FUJITSU)
IC202	8-759-941-27	s	MB4002PF (FUJITSU)
IC203	8-759-204-98	s	SN74HC08NS (TI)
L11	1-459-155-00	s	45 (WITH CORE)
L12	1-459-155-00	s	45 (WITH CORE)
L13	1-459-155-00	s	45 (WITH CORE)
L201	1-410-482-31	s	MICRO 100
L202	1-410-482-31	s	MICRO 100
L203	1-410-482-31	s	MICRO 100
L204	1-410-482-31	s	MICRO 100
Q201	8-729-201-26	s	2SC2715
Q202	8-729-201-26	s	2SC2715
Q203	8-729-201-26	s	2SC2715
R205	1-216-637-11	s	METAL CHIP 270 0.50% 1/10W
R206	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R207	1-216-658-11	s	METAL CHIP 2k 0.50% 1/10W
R208	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R209	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R212	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R213	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R215	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R216	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R217	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
RV201	1-237-514-21	s	VAR, CERMET 500
RV202	1-237-514-21	s	VAR, CERMET 500

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description			
DM-56P BOARD						
12) This board includes the DUS-259 and DUS-269 boards.						
13) This board includes the DUS-259, DUS-269, DUS-288, EQ-26, and EQ-28 boards.						
	A-6711-904-B	o	MOUNTED CIRCUIT BOARD, DM-56P			
C33	1-107-163-00	s	MICA	47pF	5%	500V
C312	1-107-339-11	s	MICA	630.8pF	0.25%	10V
C342	1-163-111-00	s	CERAMIC CHIP	56pF	5%	50V
C431	1-135-096-21	s	TANTAL CHIP	4.7	10%	10V
C432	1-135-093-21	s	TANTAL CHIP	10	10%	10V
C436	1-135-093-21	s	TANTAL CHIP	10	10%	10V
C501	1-163-103-00	s	CERAMIC CHIP	27pF	5%	50V
C512	1-163-103-00	s	CERAMIC CHIP	27pF	5%	50V
C528	1-162-716-11	s	CERAMIC	180pF	1%	50V
C529	1-162-728-11	s	CERAMIC	560pF	1%	50V
C714	1-107-340-11	s	MICA	651.2pF	0.25%	100V
C917	1-124-471-00	s	ELECT	1000	20%	6.3V
C918	1-126-103-11	s	ELECT	470	20%	16V
C920	1-124-471-00	s	ELECT	1000	20%	6.3V
C921	1-124-471-00	s	ELECT	1000	20%	6.3V
C927	1-124-224-00	s	ELECT	47	20%	6.3V
C928	1-124-471-00	s	ELECT	1000	20%	6.3V
C929	1-126-103-11	s	ELECT	470	20%	16V
C933	1-124-224-00	s	ELECT	47	20%	6.3V
21) CN1	1-566-473-11	o	PIN, SOCKET 1P			
21) CN2	1-566-473-11	o	PIN, SOCKET 1P			
21) CN3	1-566-473-11	o	PIN, SOCKET 1P			
21) CN4	1-566-473-11	o	PIN, SOCKET 1P			
CN110	1-506-746-11	s	DIN 48P			
5) CN111	1-506-748-31	s	DIN 96P			
6) CN111	1-506-748-11	s	DIN 96P			
CN1001	1-554-788-11	o	PIN 5P			
D101	8-719-109-94	s	RD6.2ES-B3			
2) D102	8-719-911-19	s	1SS119			
D201	8-719-101-23	s	1SS123			
D202	8-719-101-23	s	1SS123			
D301	8-719-109-85	s	RD5.1ES-B2			
D302	8-719-101-23	s	1SS123			
D303	8-719-101-23	s	1SS123			
D304	8-719-109-94	s	RD6.2ES-B3			
D305	8-719-109-94	s	RD6.2ES-B3			
D401	8-719-101-23	s	1SS123			
D500	8-719-109-44	s	1SS99-1			
D601	8-719-101-23	s	1SS123			
D701	8-719-109-85	s	RD5.1ES-B2			
D702	8-719-101-23	s	1SS123			
D703	8-719-109-94	s	RD6.2ES-B3			
D704	8-719-109-94	s	RD6.2ES-B3			
D801	8-719-101-23	s	1SS123			
D802	8-719-101-23	s	1SS123			
D901	8-719-101-23	s	1SS123			
D902	8-719-101-23	s	1SS123			
DL1	1-415-154-00	s	35ns			
DL501	1-415-162-21	s	50ns			

Ref.No.	Parts No.	SP	Description
FB301	1-535-178-00	s	FERRITE BEAD
FB509	1-535-178-00	s	FERRITE BEAD
FB701	1-535-178-00	s	FERRITE BEAD
FB901	1-535-178-00	s	FERRITE BEAD
FB902	1-535-178-00	s	FERRITE BEAD
FB903	1-535-178-00	s	FERRITE BEAD
FB904	1-535-178-00	s	FERRITE BEAD
1) FL301	1-236-092-11	s	LOW-PASS 5.5MHz
2) FL301	1-236-092-12	s	LOW-PASS 5.5MHz
FL302	1-236-024-11	s	LOW-PASS 4.0MHz
FL303	1-235-321-11	s	LOW-PASS 1.5MHz
FL304	1-235-546-11	s	BAND ELIMINATE 4.43MHz
FL701	1-236-185-12	s	LOW-PASS (C)
IC1	8-752-015-81	s	CX20158 (SONY)
IC2	8-752-015-81	s	CX20158 (SONY)
IC3	8-759-112-53	s	uPC1663G (NEC)
IC4	8-759-112-53	s	uPC1663G (NEC)
IC5	8-752-015-81	s	CX20158 (SONY)
IC6	8-729-801-45	s	2SC3064-E
IC101	8-769-401-89	s	TX429M
IC102	8-759-969-13	s	SN16913P (TI)
IC103	8-759-700-43	s	NJM4558M (JRC)
IC104	1-464-602-31	s	CIRCUIT UNIT, HF
IC105	8-752-006-12	s	CX20061 (SONY)
IC201	8-759-700-95	s	NJM1496M (JRC)
IC202	8-759-908-17	s	TL082CPS (TI)
IC203	8-759-951-09	s	SN75107ANS (TI)
IC204	8-759-908-17	s	TL082CPS (TI)
IC205	8-759-208-11	s	TC4053BFHB (TOSHIBA)
14) IC207	8-741-109-80	s	BX1098 (SONY)
15) IC207	8-749-920-42	s	BX1098L (SONY)
IC301	8-759-012-00	s	MC10H116M (MOTOROLA)
IC302	8-759-001-98	s	MC10198L (MOTOROLA)
IC303	8-752-015-81	s	CX20158 (SONY)
IC304	8-752-015-81	s	CX20158 (SONY)
IC305	8-759-112-53	s	uPC1663G (NEC)
IC306	8-752-006-10	s	CX20061 (SONY)
IC403	8-752-015-81	s	CX20158 (SONY)
IC401	8-752-030-80	s	CXA1039M (SONY)
IC402	8-741-154-01	s	SBX1540-31 (SONY)
IC501	8-752-015-81	s	CX20158 (SONY)
IC502	8-759-112-53	s	uPC1663G (NEC)
IC503	8-752-015-81	s	CX20158 (SONY)
IC504	8-759-112-53	s	uPC1663G (NEC)
IC505	8-752-015-81	s	CX20158 (SONY)
IC506	8-729-801-45	s	2SC3064-E
IC507	8-759-969-13	s	SN16913P (TI)
IC508	8-759-700-43	s	NJM4558M (JRC)
IC509	8-769-401-89	s	TX429M
IC601	8-759-700-95	s	NJM1496M (JRC)
IC602	8-759-908-17	s	TL082CPS (TI)
IC603	8-759-951-09	s	SN75107ANS (TI)
IC604	1-464-602-21	s	CIRCUIT UNIT, HF
IC605	8-752-006-10	s	CX20061 (SONY)
IC701	8-759-012-00	s	MC10H116M (MOTOROLA)
IC702	8-759-001-98	s	MC10198L (MOTOROLA)
IC703	8-759-112-53	s	uPC1663G (NEC)
IC704	8-752-015-81	s	CX20158 (SONY)

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Ref.No.	Parts No.	SP	Description
IC801	8-741-154-00	s	SBX1540-21 (SONY)
IC802	8-752-015-81	s	CX20158 (SONY)
IC901	8-759-205-39	s	TC74HC4049F (TOSHIBA)
IC902	8-759-205-39	s	TC74HC4049F (TOSHIBA)
IC903	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC904	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC905	8-759-205-40	s	TC74HC4050F (TOSHIBA)
IC906	8-759-204-98	s	TC74H008F (TOSHIBA)
IC907	8-759-941-17	s	SN74LS06NS (TI)
IC908	8-759-982-10	s	RC7809FA (RAYTHEON)
IC909	8-759-982-05	s	RC7805FA (RAYTHEON)
L1	1-410-482-31	s	MICRO 100
L2	1-410-482-31	s	MICRO 100
2) L3	1-410-470-11	s	MICRO 10
L4	1-410-482-31	s	MICRO 100
L5	1-410-482-31	s	MICRO 100
2) L6	1-410-470-11	s	MICRO 10
L7	1-410-482-31	s	MICRO 100
L8	1-410-482-31	s	MICRO 100
L10	1-410-482-31	s	MICRO 100
L11	1-410-466-21	s	MICRO 1.7
L101	1-410-482-31	s	MICRO 100
L102	1-410-482-31	s	MICRO 100
L103	1-410-482-31	s	MICRO 100
L105	1-410-470-11	s	MICRO 10
L106	1-410-470-11	s	MICRO 10
L107	1-410-464-11	s	MICRO 3.3
L109	1-410-473-11	s	MICRO 18
L111	1-410-482-31	s	MICRO 100
L201	1-410-482-31	s	MICRO 100
L203	1-410-482-31	s	MICRO 100
L204	1-410-482-31	s	MICRO 100
L205	1-410-482-31	s	MICRO 100
L206	1-410-482-31	s	MICRO 100
L301	1-410-482-11	s	MICRO 100
L303	1-410-482-31	s	MICRO 100
L304	1-410-482-31	s	MICRO 100
L305	1-410-482-31	s	MICRO 100
L307	1-410-482-31	s	MICRO 100
L308	1-410-482-31	s	MICRO 100
L309	1-410-482-31	s	MICRO 100
L310	1-410-482-31	s	MICRO 100
L311	1-410-478-11	s	MICRO 47
L401	1-410-482-31	s	MICRO 100
L402	1-410-482-31	s	MICRO 100
L403	1-410-482-31	s	MICRO 100
L406	1-410-461-41	s	MICRO 1.8
L407	1-410-482-31	s	MICRO 100
L408	1-410-478-11	s	MICRO 47
L409	1-410-482-31	s	MICRO 100
L410	1-410-482-31	s	MICRO 100
L501	1-410-482-31	s	MICRO 100
L502	1-410-482-31	s	MICRO 100
L503	1-410-482-31	s	MICRO 100
L504	1-410-482-31	s	MICRO 100
L506	1-410-482-31	s	MICRO 100
L509	1-410-482-31	s	MICRO 100
L510	1-410-482-31	s	MICRO 100
L511	1-410-482-31	s	MICRO 100
L601	1-410-482-31	s	MICRO 100
L602	1-410-468-11	s	MICRO 6.8

Ref.No.	Parts No.	SP	Description
L603	1-410-482-31	s	MICRO 100
L604	1-410-482-31	s	MICRO 100
L605	1-410-482-31	s	MICRO 100
2) L607	1-410-468-11	s	MICRO 6.8
L608	1-410-471-11	s	MICRO 12
L609	1-410-482-31	s	MICRO 100
L701	1-410-482-31	s	MICRO 100
L703	1-410-482-31	s	MICRO 100
L705	1-410-482-31	s	MICRO 100
L801	1-410-482-31	s	MICRO 100
L802	1-410-482-31	s	MICRO 100
L803	1-410-482-31	s	MICRO 100
1) L804	1-410-466-41	s	MICRO 4.7
L805	1-410-482-31	s	MICRO 100
L806	1-410-482-31	s	MICRO 100
L901	1-410-482-31	s	MICRO 100
L902	1-459-155-00	s	45 (WITH CORE)
L903	1-459-155-00	s	45 (WITH CORE)
L904	1-459-155-00	s	45 (WITH CORE)
L905	1-459-155-00	s	45 (WITH CORE)
L906	1-459-155-00	s	45 (WITH CORE)
LV1	1-408-634-00	s	FIXED
Q1	8-729-101-25	s	2SC1009A
Q2	8-729-102-06	s	2SC2223
Q3	8-729-202-38	s	2SC3326N
Q4	8-729-101-25	s	2SC1009A
Q5	8-729-101-25	s	2SC1009A
Q6	8-729-101-25	s	2SC1009A
Q7	8-729-900-53	s	DTC114EK
14) Q8	8-729-900-53	s	DTC114EK
Q9	8-729-101-25	s	2SC1009A
Q10	8-729-101-25	s	2SC1009A
Q11	8-729-101-25	s	2SC1009A
Q12	8-729-101-25	s	2SC1009A
Q13	8-729-101-25	s	2SC1009A
2) Q15	8-729-900-36	s	DTC124ES
Q16	8-729-101-25	s	2SC1009A
Q18	8-729-102-06	s	2SC2223
Q19	8-729-202-38	s	2SC3326N
Q20	8-729-122-63	s	2SA1226
Q21	8-729-202-38	s	2SC3326N
Q22	8-729-202-38	s	2SC3326N
Q23	8-729-202-38	s	2SC3326N
Q24	8-729-202-38	s	2SC3326N
Q25	8-729-101-25	s	2SC1009A
Q26	8-729-101-25	s	2SC1009A
Q27	8-729-101-25	s	2SC1009A
Q28	8-729-101-25	s	2SC1009A
Q101	8-729-101-25	s	2SC1009A
Q102	8-729-101-25	s	2SC1009A
Q103	8-729-101-25	s	2SC1009A
Q104	8-729-101-25	s	2SC1009A
Q105	8-729-101-25	s	2SC1009A
Q106	8-729-101-25	s	2SC1009A
Q107	8-729-101-25	s	2SC1009A
Q108	8-729-101-25	s	2SC1009A
Q109	8-729-101-25	s	2SC1009A

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
Q110	8-729-101-25	s	2SC1009A
Q111	8-729-101-25	s	2SC1009A
Q112	8-729-101-25	s	2SC1009A
Q113	8-729-101-25	s	2SC1009A
Q114	8-729-101-25	s	2SC1009A
Q115	8-729-101-25	s	2SC1009A
Q116	8-729-101-25	s	2SC1009A
Q117	8-729-102-06	s	2SC2223
Q118	8-729-102-06	s	2SC2223
Q119	8-729-102-06	s	2SC2223
Q201	8-729-101-25	s	2SC1009A
Q202	8-729-101-25	s	2SC1009A
Q203	8-729-101-25	s	2SC1009A
Q204	8-729-202-38	s	2SC3326N
Q205	8-729-202-38	s	2SC3326N
Q206	8-729-202-38	s	2SC3326N
Q207	8-729-202-38	s	2SC3326N
Q208	8-729-101-25	s	2SC1009A
Q301	8-729-122-63	s	2SA1226
Q302	8-729-122-63	s	2SA1226
Q303	8-729-102-06	s	2SC2223
Q304	8-729-101-25	s	2SC1009A
Q305	8-729-101-25	s	2SC1009A
Q306	8-729-101-25	s	2SC1009A
Q307	8-729-101-25	s	2SC1009A
Q308	8-729-101-25	s	2SC1009A
Q309	8-729-101-25	s	2SC1009A
Q310	8-729-101-25	s	2SC1009A
Q311	8-729-101-25	s	2SC1009A
Q312	8-729-101-25	s	2SC1009A
Q313	8-729-202-38	s	2SC3326N
Q314	8-729-102-06	s	2SC2223
Q315	8-729-101-25	s	2SC1009A
Q316	8-729-101-25	s	2SC1009A
Q317	8-729-101-25	s	2SC1009A
Q318	8-729-101-25	s	2SC1009A
Q403	8-729-101-25	s	2SC1009A
Q414	8-729-101-25	s	2SC1009A
Q409	8-729-101-25	s	2SC1009A
Q410	8-729-101-25	s	2SC1009A
Q411	8-729-101-25	s	2SC1009A
Q412	8-729-101-25	s	2SC1009A
Q413	8-729-101-25	s	2SC1009A
Q414	8-729-101-25	s	2SC1009A
Q415	8-729-101-25	s	2SC1009A
Q416	8-729-101-25	s	2SC1009A
Q417	8-729-900-36	s	DTC124ES
Q501	8-729-101-25	s	2SC1009A
Q504	8-729-101-25	s	2SC1009A
Q505	8-729-101-25	s	2SC1009A
Q508	8-729-101-25	s	2SC1009A
Q509	8-729-202-38	s	2SC3326N
Q510	8-729-101-25	s	2SC1009A
Q511	8-729-101-25	s	2SC1009A
14) Q512	8-729-900-53	s	DTC114EK
Q513	8-729-202-38	s	2SC3326N
Q514	8-729-202-38	s	2SC3326N
Q515	8-729-202-38	s	2SC3326N
Q516	8-729-202-38	s	2SC3326N
Q517	8-729-202-38	s	2SC3326N
Q518	8-729-122-63	s	2SA1226
Q519	8-729-101-25	s	2SC1009A
Q520	8-729-101-25	s	2SC1009A
Q521	8-729-101-25	s	2SC1009A
Q522	8-729-101-25	s	2SC1009A

Ref.No.	Parts No.	SP	Description
Q524	8-729-101-25	s	2SC1009A
Q525	8-729-101-25	s	2SC1009A
Q526	8-729-101-25	s	2SC1009A
14) Q527	8-729-900-53	s	DTC114EK
Q601	8-729-101-25	s	2SC1009A
Q602	8-729-101-25	s	2SC1009A
Q603	8-729-101-25	s	2SC1009A
Q604	8-729-202-38	s	2SC3326N
Q605	8-729-202-38	s	2SC3326N
Q606	8-729-202-38	s	2SC3326N
Q607	8-729-101-25	s	2SC1009A
Q608	8-729-101-25	s	2SC1009A
Q609	8-729-102-06	s	2SC2223
Q610	8-729-102-06	s	2SC2223
Q701	8-729-101-25	s	2SC1009A
Q702	8-729-122-63	s	2SA1226
Q703	8-729-122-63	s	2SA1226
Q704	8-729-101-25	s	2SC1009A
Q705	8-729-101-25	s	2SC1009A
Q706	8-729-101-25	s	2SC1009A
Q707	8-729-101-25	s	2SC1009A
Q708	8-729-101-25	s	2SC1009A
Q709	8-729-101-25	s	2SC1009A
Q801	8-729-101-25	s	2SC1009A
1) Q802	8-729-109-44	s	2SK94
Q803	8-729-101-25	s	2SC1009A
1) Q804	8-729-122-63	s	2SA1226
Q813	8-729-101-25	s	2SC1009A
Q814	8-729-101-25	s	2SC1009A
Q901	8-729-101-25	s	2SC1009A
Q902	8-729-122-63	s	2SA1226
2) R2	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R3	1-216-630-11	s	METAL CHIP 130 0.50% 1/10W
R4	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R5	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R6	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R14	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
2) R34	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
R36	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R37	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R38	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R39	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R40	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R46	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R56	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
1) R69	1-216-654-11	s	METAL CHIP 1.3k 0.50% 1/10W
22) R69	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
20) R69	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
R70	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
1) R71	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
22) R71	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
20) R71	1-216-646-11	s	METAL CHIP 620 0.50% 1/10W
R73	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R74	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R90	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R91	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R92	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R93	1-216-642-11	s	METAL CHIP 430 0.50% 1/10W
R94	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R95	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R96	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W

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	Ref.No.	Parts No.	SP	Description		
	R103	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
	R104	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
	R112	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R114	1-216-687-11	s	CARBON 33k	0.50%	1/10W
	R121	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
	R122	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
	R123	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
	R124	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R125	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R126	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R127	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R128	1-216-643-11	s	METAL CHIP 479	0.50%	1/10W
	R129	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R130	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
	R131	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R132	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
	R138	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R145	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R202	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
	R219	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
	R225	1-216-690-11	s	METAL CHIP 43k	0.50%	1/10W
19)	R228	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
20)	R228	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
	R229	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
	R303	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R304	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R305	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R306	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R307	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R308	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R309	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
	R310	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R311	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
	R312	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
	R313	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R314	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R315	1-216-654-11	s	METAL CHIP 1.3k	0.50%	1/10W
	R316	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
	R317	1-216-651-11	s	METAL CHIP 47	0.50%	1/10W
	R318	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R319	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R320	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R321	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
	R322	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
	R323	1-218-178-11	s	METAL 1k	0.10%	1/16W
	R324	1-218-176-11	s	METAL 289	0.10%	1/16W
	R327	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R332	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
	R334	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
	R337	1-216-648-11	s	METAL CHIP 750	0.50%	1/10W
	R338	1-216-629-11	s	METAL CHIP 120	0.50%	1/10W
	R339	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
	R340	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R342	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R343	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
	R344	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R346	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R357	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
12)	R358	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
12)	R359	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
13)	R359	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
12)	R363	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R365	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R366	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
	R368	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W

	Ref.No.	Parts No.	SP	Description		
	R370	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
	R376	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R377	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
	R401	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
	R402	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R403	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
	R420	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R421	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
	R422	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
	R424	1-216-642-11	s	METAL CHIP 430	0.50%	1/10W
	R426	1-216-030-00	s	CHIP 160	0.50%	1/10W
	R430	1-216-658-11	s	METAL CHIP 2k	0.50%	1/10W
	R432	1-216-637-11	s	METAL CHIP 270	0.50%	1/10W
	R434	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
	R435	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
	R441	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
	R448	1-216-638-11	s	METAL CHIP 3.00	0.50%	1/10W
	R449	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
	R450	1-216-623-11	s	METAL CHIP 68	0.50%	1/10W
	R452	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R505	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
	R526	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
	R541	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R544	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R546	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
	R565	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R566	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R567	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R568	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
	R569	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
	R582	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
	R583	1-216-675-11	s	METAL CHIP 10k	0.10%	1/16W
	R591	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R593	1-216-687-11	s	METAL CHIP 33k	0.50%	1/10W
	R602	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R606	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R618	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
	R621	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
	R622	1-216-690-11	s	METAL CHIP 43k	0.50%	1/10W
	R626	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
	R635	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
	R636	1-216-646-11	s	METAL CHIP 620	0.50%	1/10W
1)	R641	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
2)	R641	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
	R642	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R643	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
	R644	1-216-646-11	s	METAL CHIP 620	0.05%	1/10W
	R645	1-216-644-11	s	METAL CHIP 510	0.55%	1/10W
	R646	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
	R647	1-216-648-11	s	METAL CHIP 750	0.50%	1/10W
	R702	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R703	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R704	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R705	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R705	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R707	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R708	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
	R709	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R710	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
	R711	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
	R712	1-216-649-11	s	METAL CHIP 820	0.50%	1/16W
	R713	1-216-619-11	s	METAL CHIP 47	0.50%	1/16W
	R714	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
	R715	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
	R716	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
R717	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R718	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
R719	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R720	1-218-177-11	s	METAL 1k 0.10% 1/16W
R721	1-218-175-11	s	METAL 267 0.10% 1/16W
R722	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R723	1-216-654-11	s	METAL CHIP 1.3k 0.50% 1/10W
R729	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
R738	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R739	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R740	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R741	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
R742	1-216-638-11	s	METAL CHIP 300 0.50% 1/10W
R743	1-216-638-11	s	METAL CHIP 300 0.50% 1/10W
R744	1-216-638-11	s	METAL CHIP 300 0.50% 1/10W
R745	1-216-638-11	s	METAL CHIP 300 0.50% 1/10W
R748	1-216-629-11	s	METAL CHIP 120 0.50% 1/10W
R749	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R750	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1) R801	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R802	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
1) R803	1-216-650-11	s	CARBON 910 0.50% 1/10W
R804	1-216-651-11	s	CARBON 1k 0.50% 1/10W
1) R805	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
1) R807	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R824	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R827	1-216-615-11	s	METAL CHIP 33 0.50% 1/10W
R828	1-216-675-11	s	METAL CHIP 10 0.50% 1/10W
R835	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R836	1-216-623-11	s	METAL CHIP 68 0.50% 1/10W
RB901	1-231-411-00	s	RESISTOR BLOCK 100k
1) RV1	1-237-538-11	s	VAR, CERMET 2k
2) RV1	1-228-458-00	s	VAR, CERMET 5k
RV2	1-228-457-00	s	VAR, CERMET 2k
RV3	1-228-459-00	s	VAR, CERMET 10k
RV4	1-228-456-00	s	VAR, CERMET 1k
1) RV5	1-237-538-11	s	VAR, CERMET 2k
1) RV6	1-237-538-11	s	VAR, CERMET 2k
2) RV6	1-228-458-00	s	VAR, CERMET 5k
RV7	1-228-457-00	s	VAR, CERMET 2k
RV8	1-228-459-00	s	VAR, CERMET 10k
14) RV9	1-228-457-00	s	VAR, CERMET 2k
14) RV11	1-237-515-21	s	VAR, CERMET 1k
14) RV12	1-237-515-21	s	VAR, CERMET 1k
14) RV13	1-237-515-21	s	VAR, CERMET 1k
14) RV14	1-237-515-21	s	VAR, CERMET 1k
RV15	1-228-456-00	s	VAR, CERMET 1k
RV102	1-237-515-21	s	VAR, CERMET 1k
RV103	1-237-515-21	s	VAR, CERMET 1k
RV104	1-228-459-00	s	VAR, CERMET 10k
RV105	1-228-456-00	s	VAR, CERMET 1k
RV106	1-237-515-21	s	VAR, CERMET 1k
RV107	1-237-515-21	s	VAR, CERMET 1k
RV201	1-228-457-00	s	VAR, CERMET 2k
RV202	1-228-454-00	s	VAR, CERMET 200
RV203	1-228-459-00	s	VAR, CERMET 10k
12) RV204	1-228-461-00	s	VAR, CERMET 50k
13) RV204	1-228-462-00	s	VAR, CERMET 100k
19) RV205	1-228-461-00	s	VAR, CERMET 50k
20) RV205	1-228-462-00	s	VAR, CERMET 100k
RV206	1-228-459-00	s	VAR, CERMET 10k

Ref.No.	Parts No.	SP	Description
RV207	1-228-459-00	s	VAR, CERMET 10k
RV301	1-228-459-00	s	VAR, CERMET 10k
RV302	1-228-454-00	s	VAR, CERMET 200
RV303	1-228-456-00	s	VAR, CERMET 1k
RV304	1-228-455-00	s	VAR, CERMET 500
RV305	1-237-518-21	s	VAR, CERMET 10k
RV306	1-228-458-00	s	VAR, CERMET 5k
RV307	1-228-458-00	s	VAR, CERMET 5k
RV308	1-228-456-00	s	VAR, CERMET 1k
RV401	1-228-458-00	s	VAR, CERMET 5k
RV405	1-228-462-00	s	VAR, CERMET 100k
5) RV501	1-228-455-00	s	VAR, CERMET 500
6) RV501	1-228-457-00	s	VAR, CERMET 2k
RV502	1-228-459-00	s	VAR, CERMET 10k
RV503	1-228-456-00	s	VAR, CERMET 1k
5) RV504	1-228-455-00	s	VAR, CERMET 500
6) RV504	1-228-457-00	s	VAR, CERMET 2k
RV505	1-228-459-00	s	VAR, CERMET 10k
14) RV507	1-228-457-00	s	VAR, CERMET 2k
14) RV508	1-237-515-21	s	VAR, CERMET 1k
14) RV509	1-237-515-21	s	VAR, CERMET 1k
14) RV510	1-237-515-21	s	VAR, CERMET 1k
14) RV511	1-237-515-21	s	VAR, CERMET 1k
RV512	1-228-457-00	s	VAR, CERMET 2k
RV601	1-228-458-00	s	VAR, CERMET 5k
RV602	1-228-455-00	s	VAR, CERMET 500
RV603	1-228-459-00	s	VAR, CERMET 10k
RV604	1-228-462-00	s	VAR, CERMET 100k
RV605	1-228-460-00	s	VAR, CERMET 20k
RV606	1-228-459-00	s	VAR, CERMET 10k
RV701	1-228-460-00	s	VAR, CERMET 20k
RV702	1-228-455-00	s	VAR, CERMET 500
RV703	1-237-516-21	s	VAR, CERMET 2k
RV704	1-228-456-00	s	VAR, CERMET 1k
RV802	1-228-456-00	s	VAR, CERMET 1k
S402	1-552-509-00	s	DIP
S403	1-552-509-00	s	DIP
S802	1-552-509-00	s	DIP
S901	1-552-509-00	s	DIP
3) SP101	1-560-733-00	s	PIN, SHORT
4) SP101	1-566-385-11	s	PIN 2P
3) SP102	1-560-733-00	s	PIN, SHORT
4) SP102	1-566-385-11	s	PIN 2P
3) SP301	1-560-733-00	s	PIN, SHORT
4) SP301	1-566-385-11	s	PIN 2P
3) SP402	1-560-733-00	s	PIN, SHORT
4) SP402	1-566-385-11	s	PIN 2P
3) SP501	1-560-733-00	s	PIN, SHORT
4) SP501	1-566-385-11	s	PIN 2P
3) SP502	1-560-733-00	s	PIN, SHORT
4) SP502	1-566-385-11	s	PIN 2P
3) SP701	1-560-733-00	s	PIN, SHORT
4) SP701	1-566-385-11	s	PIN 2P
3) SP801	1-560-733-00	s	PIN, SHORT
4) SP801	1-566-385-11	s	PIN 2P

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
3) SS101	1-561-832-00	s	SOCKET, SHORT
4) SS101	1-565-413-11	s	RECEPTACLE 2P
3) SS301	1-561-832-00	s	SOCKET, SHORT
4) SS301	1-565-413-11	s	RECEPTACLE 2P
3) SS402	1-561-832-00	s	SOCKET, SHORT
4) SS402	1-565-413-11	s	RECEPTACLE 2P
3) SS501	1-561-832-00	s	SOCKET, SHORT
4) SS501	1-565-413-11	s	RECEPTACLE 2P
3) SS701	1-561-832-00	s	SOCKET, SHORT
4) SS701	1-565-413-11	s	RECEPTACLE 2P
3) SS801	1-561-832-00	s	SOCKET, SHORT
4) SS801	1-565-413-11	s	RECEPTACLE 2P
TH301	1-800-202-XX	s	S-10K
TH402	1-800-200-00	s	S-3K
TH701	1-800-200-00	s	S-3K

DP-71A BOARD

All the component parts on the DP-71A board are supplied together when you order the key chassis ass'y.

	1-622-556-11	o	PRINTED CIRCUIT BOARD, DP-71
D60	8-719-942-19	s	LB-402VK
D61	8-719-942-19	s	LB-402VK
D62	8-719-942-19	s	LB-402VK
D63	8-719-942-19	s	LB-402VK
S29	1-552-539-00	s	KEY BOARD

DP-72 BOARD

	1-622-591-12	o	PRINTED CIRCUIT BOARD, DP-72
D1	8-719-800-89	s	TLY255
D2	8-719-800-89	s	TLY255
D3	8-719-800-89	s	TLY255
D4	8-719-800-89	s	TLY255

DP-73 BOARD

All the component parts on the DP-73 board are supplied together when you order the indication tube ass'y.

C101	1-124-556-11	s	ELECT 2200 20% 16V
L101	1-459-155-00	s	45 (WITH CORE)
L102	1-459-155-00	s	45 (WITH CORE)

Ref.No.	Parts No.	SP	Description
R101	1-207-620-11	s	WIRE 1 10% 3W
R102	1-532-675-21	s	IC LINK
S101	1-571-258-11	s	SLIDE
S102	1-571-258-11	s	SLIDE

DP-74 BOARD

All the component parts on the DP-74 board are supplied together when you order the indication tube ass'y.

C5	1-124-255-00	s	ELECT 100 20% 6.3V
C6	1-124-248-00	s	ELECT 22 20% 35V
C8	1-124-584-00	s	ELECT 100 20% 10V
C9	1-124-584-00	s	ELECT 100 20% 10V
C13	1-124-255-00	s	ELECT 1 20% 50V
C14	1-124-224-00	s	ELECT 47 20% 6.3V
D1	8-719-109-65	s	RD3.3ES-B1
D2	8-719-100-05	s	1S2837
D3	8-719-109-72	s	RD3.9ES-B2
D4	8-719-100-05	s	1S2837
D5	8-719-100-05	s	1S2837
IC1	8-759-942-62	s	MB88515B-280M (FUJITSU)
IC2	8-759-904-71	s	MSL917RS (OKI)
Q1	8-729-901-06	s	DTA144EK
Q2	8-729-901-06	s	DTA144EK
Q3	8-729-901-06	s	DTA144EK
Q4	8-729-271-23	s	2SC2712
Q5	8-729-271-23	s	2SC2712
RV1	1-228-471-00	s	VAR, CERMET 1k
X1	1-567-143-00	s	OSCILLATOR, CERAMIC 6.00MHz

DR-56 BOARD

	1-622-561-11	o	PRINTED CIRCUIT BOARD, DR-56
Q1	8-729-376-83	s	2SA768-Y
Q2	8-729-402-10	s	2SD1276A
Q3	8-729-402-10	s	2SD1276A
Q4	8-729-402-10	s	2SD1276A
Q5	8-729-402-10	s	2SD1276A
Q6	8-729-402-10	s	2SD1276A
Q7	8-729-402-10	s	2SD1276A
Q8	8-729-376-83	s	2SA768-Y
Q9	8-729-102-57	s	2SC3012
Q10	8-729-114-11	s	2SA1141

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
Q11	8-729-114-11	s	2SA1141
Q12	8-729-102-57	s	2SC3012

DUS-259 BOARD

All the component parts on the DUS-259 board are supplied together when you order the DM-56P board.

2) C1	1-107-080-00	s	SILVERD 62pF 5% 50V	
CN1	1-564-783-11	o	5P	
1) L1	1-410-471-21	s	MICRO 12	
1) Q1	8-729-102-07	s	2SC2223-F13	
1) Q2	8-729-102-07	s	2SC2223-F13	
R2	1-216-625-11	s	METAL CHIP 82	0.50% 1/10W
R3	1-216-630-11	s	METAL CHIP 130	0.50% 1/10W

DUS-269 BOARD

All the component parts on the DUS-269 board are supplied together when you order DM-56P board.

C625	1-126-101-11	s	ELECT 100	20% 16V
CN1	1-566-473-21	s	1P	
CN2	1-566-473-11	s	1P	
CN3	1-566-473-21	s	1P	
CN4	1-566-473-11	s	1P	
L606	1-410-782-31	s	MICRO 100	
Q1	8-729-104-51	s	2SC1009A	
Q2	8-729-104-51	s	2SC1009A	
R1	1-216-651-11	s	METAL CHIP 10k	0.50% 1/10W
R2	1-216-650-11	s	METAL CHIP 910	0.50% 1/10W
R3	1-216-651-11	s	METAL CHIP 10k	0.50% 1/10W
RV1	1-228-457-11	s	VAR, CERMET 2k	

Ref.No.	Parts No.	SP	Description

2) **DUS-270 BOARD**

All the component parts on the DUS-270 board are supplied together when you order the VO-18AP board.

C655	1-124-222-00	s	ELECT 22	20% 6.3V
Q607	8-729-100-66	s	2SC1623	
Q608	8-729-100-66	s	2SC1623	

13) **DUS-288 BOARD**

All the component parts on the DUS-288 board are supplied together when you order the DM-56P board.

	1-628-943-11	o	PRINTED CIRCUIT BOARD, DUS-288	
C1	1-163-241-00	s	CERAMIC CHIP 39pF	5% 50V
CN1	1-566-473-11	o	PIN, SOCKET 1P	
CN2	1-566-473-11	o	PIN, SOCKET 1P	
CV1	1-141-260-00	s	TRIMMER, CERAMIC 30pF	
Q1	8-729-109-43	s	2SK94-X3	
R1	1-216-683-11	s	METAL CHIP 22k	0.50% 1/10W

EN-48P BOARD

	A-6711-891-A	o	MOUNTED CIRCUIT BOARD, EN-48P	
C6	1-124-584-00	s	ELECT 100	20% 10V
C8	1-124-584-00	s	ELECT 100	20% 10V
C12	1-124-222-00	s	ELECT 22	20% 6.3V
C13	1-124-462-00	s	ELECT 10	20% 6.3V
C14	1-124-584-00	s	ELECT 100	20% 10V
C16	1-124-584-00	s	ELECT 100	20% 10V
C21	1-124-584-00	s	ELECT 100	20% 10V
C22	1-124-584-00	s	ELECT 100	20% 10V
C41	1-162-886-21	s	CERAMIC 390pF	5% 50V
C43	1-124-236-00	s	ELECT 47	20% 10V
C46	1-124-236-00	s	ELECT 47	20% 10V
C48	1-124-236-00	s	ELECT 47	20% 10V
C51	1-124-584-00	s	ELECT 100	20% 10V
C53	1-124-584-00	s	ELECT 100	20% 10V
C55	1-163-033-00	s	CERAMIC CHIP 0.022	50V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description			
C56	1-124-236-00	s	ELECT	47	20%	16V
C59	1-124-236-00	s	ELECT	47	20%	16V
C61	1-163-033-00	s	CERAMIC CHIP	0.022		50V
C64	1-162-880-21	s	CERAMIC	120pF	5%	50V
C68	1-124-584-00	s	ELECT	100	20%	10V
C70	1-124-236-00	s	ELECT	47	20%	10V
C71	1-162-877-21	s	CERAMIC	82pF	5%	50V
C72	1-107-158-51	s	MICA SILVED	30pF	5%	500V
C77	1-124-584-00	s	ELECT	100	20%	10V
C81	1-124-584-00	s	ELECT	100	20%	10V
C85	1-124-236-00	s	ELECT	47	20%	10V
C86	1-162-886-21	s	CERAMIC	390pF	5%	50V
C89	1-161-463-00	s	CERAMIC	220pF	5%	50V
C92	1-124-584-00	s	ELECT	100	20%	10V
C94	1-131-371-00	s	TANTAL	10	20%	16V
C95	1-131-371-00	s	TANTAL	10	20%	16V
C101	1-131-371-00	s	TANTAL	10	20%	16V
C102	1-131-371-00	s	TANTAL	10	20%	16V
C111	1-124-584-00	s	ELECT	100	20%	10V
C112	1-124-225-00	s	ELECT	100	20%	6.3V
C115	1-124-584-00	s	ELECT	100	20%	10V
C117	1-124-584-00	s	ELECT	100	20%	10V
C118	1-124-225-00	s	ELECT	100	20%	6.3V
C126	1-124-584-00	s	ELECT	100	20%	10V
C130	1-124-584-00	s	ELECT	100	20%	10V
C134	1-124-225-00	s	ELECT	100	20%	6.3V
C203	1-124-584-00	s	ELECT	100	20%	10V
C204	1-124-584-00	s	ELECT	100	20%	10V
C214	1-163-033-00	s	CERAMIC CHIP	0.022		50V
C216	1-163-033-00	s	CERAMIC CHIP	0.022		50V
2) C350	1-124-584-00	s	ELECT	100	20%	10V
2) C357	1-124-584-00	s	ELECT	100	20%	10V
C400	1-124-225-00	s	ELECT	100	20%	6.3V
C503	1-124-462-00	s	ELECT	10	20%	6.3V
C506	1-124-584-00	s	ELECT	100	20%	10V
C507	1-124-584-00	s	ELECT	100	20%	10V
C508	1-161-463-00	s	CERAMIC	220pF	5%	50V
C603	1-124-462-00	s	ELECT	10	20%	6.3V
C604	1-124-236-00	s	ELECT	47	20%	10V
C613	1-161-463-00	s	CERAMIC	220pF	5%	50V
C711	1-124-584-00	s	ELECT	100	20%	10V
5) CN102	1-506-748-31	s	DIN 96P			
6) CN102	1-506-748-11	s	DIN 96P			
1) CV1	1-141-304-11	s	TRIMMER			
D1	8-719-100-03	s	1S2835			
DL1	1-415-538-11	s	ACTIVE 100ns			
FL1	1-236-004-11	s	LOW-PASS 2.5MHz			
FL2	1-236-004-11	s	LOW-PASS 2.5MHz			
FL3	1-236-529-11	s	BANDPASS 4.43MHz			
FL4	1-236-120-11	s	BANDPASS 4.43MHz			

Ref.No.	Parts No.	SP	Description
IC1	8-759-014-29	s	MC34184M (MOTOROLA)
IC2	1-808-743-11	s	CIRCUIT UNIT, VA
1) IC3	8-759-200-81	s	TC4053BF (TOSHIBA)
2) IC3	8-759-009-07	s	MC14053BF (MOTOROLA)
IC4	8-759-906-59	s	CX22017 (SONY)
IC5	8-752-053-97	s	CX20158 (SONY)
IC6	8-759-030-16	s	MC34182M (MOTOROLA)
IC10	8-759-012-02	s	MC10H124M (MOTOROLA)
IC11	8-759-012-03	s	MC10H131M (MOTOROLA)
IC12	8-759-929-73	s	SN74LS00NS (TI)
IC13	8-759-011-98	s	MC10H113M (MOTOROLA)
IC14	8-759-204-96	s	TC74HC04F (TOSHIBA)
IC15	8-759-007-50	s	MC74HC11F (MOTOROLA)
IC16	8-759-922-49	s	SN74LS74ANS (TI)
IC17	8-759-908-17	s	TL082CPS (TI)
IC18	8-759-206-28	s	TC74HC123F (TOSHIBA)
IC19	8-759-907-81	s	SN74LS221NS (TI)
IC20	8-759-918-71	s	CX23065 (SONY)
IC21	8-759-929-78	s	SN74LS04NS (TI)
IC22	8-759-930-56	s	SN74LS163ANS (TI)
IC24	8-759-941-27	s	MB4002PF (FUJITSU)
IC25	8-759-922-49	s	SN74LS74ANS (TI)
1) IC26	8-759-929-73	s	SN74LS00NS (TI)
2) IC26	8-759-941-17	s	SN74LS06NS (TI)
IC27	8-759-907-81	s	SN74LS221NS (TI)
IC31	8-759-922-49	s	SN74LS74ANS (TI)
IC32	8-759-907-81	s	SN74LS221NS (TI)
IC33	8-759-907-81	s	SN74LS221NS (TI)
IC34	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC35	8-759-030-16	s	MC34182M (MOTOROLA)
IC36	8-759-907-81	s	SN74LS221NS (TI)
IC37	8-759-929-99	s	SN74LS32NS (TI)
1) IC38	8-759-200-81	s	TC4053BF (TOSHIBA)
2) IC38	8-759-009-07	s	MC14053BF (MOTOROLA)
IC39	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC50	8-759-014-29	s	MC34184M (MOTOROLA)
IC51	8-759-015-81	s	CX20158 (SONY)
1) IC52	1-464-601-11	s	CIRCUIT UNIT, VA
IC53	8-752-015-81	s	CX20158 (SONY)
1) IC54	8-759-200-81	s	TC4053BF (TOSHIBA)
2) IC54	8-759-009-07	s	MC14053BF (MOTOROLA)
1) IC55	1-464-601-11	s	CIRCUIT UNIT, VA
2) IC56	8-759-009-07	s	MC14053BF (MOTOROLA)
IC60	1-808-743-11	s	CIRCUIT UNIT, VA
1) IC70	8-759-908-17	s	TL082CPS (TI)
2) IC70	8-759-030-16	s	MC34182M (MOTOROLA)
IC71	8-752-015-81	s	CX20158 (SONY)
1) IC72	1-464-601-11	s	CIRCUIT UNIT, VA
2) IC72	1-752-015-81	s	CX20158 (SONY)
IC101	8-759-708-09	s	NJM78L09A (JRC)
IC102	8-759-700-65	s	NJM79L05A (JRC)
IC103	8-759-937-61	s	S-81230AG (SEIKO I AND E)
IC104	8-759-941-79	s	S-80230AG (SEIKO I AND E)
IC105	8-759-908-15	s	TL431CLP (TI)
IC106	8-759-708-05	s	NJM78L05A (JRC)
IC107	8-759-708-08	s	NJM78L08A (JRC)
IC108	8-759-700-65	s	NJM79L05A (JRC)
IC109	8-759-700-67	s	NJM79L08A (JRC)
IC110	8-759-708-05	s	NJM78L05A (JRC)
IC111	8-759-708-08	s	NJM78L08A (JRC)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
IC112	8-759-700-65	s	NJM79L05A (JRC)
IC113	8-759-700-67	s	NJM79L08A (JRC)
IC114	8-759-908-15	s	TL431CLP (TI)
2) IC115	8-759-700-67	s	NJM79L08A (JRC)
2) IC116	8-759-708-05	s	NJM78L05A (JRC)
2) IC117	8-759-700-65	s	NJM79L05A (JRC)
IC201	8-759-012-02	s	MC10H124M (MOTOROLA)
IC202	8-759-012-03	s	MC10H131M (MOTOROLA)
IC203	8-759-011-98	s	MC10H113M (MOTOROLA)
IC204	8-759-918-71	s	CX23065 (SONY)
IC206	8-759-930-56	s	SN74LS163ANS (TI)
IC501	8-759-700-95	s	NJM1496M (JRC)
IC601	8-759-700-95	s	NJM1496M (JRC)
IC701	8-759-206-28	s	TC74HC123F (TOSHIBA)
IC702	8-759-902-88	s	SN74LS123NS (TI)
1) IC703	8-759-908-17	s	TL082CPS (TI)
2) IC703	8-759-030-16	s	MC34182M (MOTOROLA)
IC704	8-759-922-49	s	SN74LS74ANS (TI)
1) IC705	8-759-908-17	s	TL082CPS (TI)
2) IC705	8-759-030-16	s	MC34182M (MOTOROLA)
L13	1-410-478-11	s	MICRO 47
1) L14	1-410-478-11	s	MICRO 47
L16	1-410-478-11	s	MICRO 47
L17	1-410-478-11	s	MICRO 47
1) L18	1-410-478-11	s	MICRO 47
L19	1-410-478-11	s	MICRO 47
L20	1-410-470-11	s	MICRO 10
L21	1-410-470-11	s	MICRO 10
L22	1-410-478-11	s	MICRO 47
L100	1-421-329-00	s	CHOKE
L101	1-421-329-00	s	CHOKE
L102	1-421-329-00	s	CHOKE
L103	1-421-329-00	s	CHOKE
L104	1-421-329-00	s	CHOKE
1) L350	1-410-471-11	s	MICRO 12
2) L350	1-410-470-21	s	MICRO 10
1) L351	1-410-471-11	s	MICRO 12
2) L351	1-410-470-21	s	MICRO 10
2) L352	1-410-468-21	s	MICRO 6.8
L501	1-410-482-31	s	MICRO 100
L601	1-410-482-11	s	MICRO 100
L602	1-410-478-11	s	MICRO 47
L603	1-410-478-11	s	MICRO 47
Q1	8-729-201-27	s	2SC2715-Y
Q2	8-729-312-22	s	2SA1122
Q3	8-729-102-07	s	2SC2223
Q4	8-729-201-27	s	2SC2715-Y
1) Q5	8-729-102-07	s	2SC2223
Q6	8-729-201-27	s	2SC2715-Y
Q7	8-729-312-22	s	2SA1122
Q8	8-729-201-27	s	2SC2715-Y
Q9	8-729-201-27	s	2SC2715-Y
Q10	8-729-201-27	s	2SC2715-Y
Q11	8-729-201-27	s	2SC2715-Y
1) Q12	8-729-102-07	s	2SC2223
Q13	8-729-312-22	s	2SA1122
Q14	8-729-312-22	s	2SA1122
2) Q15	8-729-102-07	s	2SC2223

Ref.No.	Parts No.	SP	Description
2) Q16	8-729-122-63	s	2SA1226
2) Q17	8-729-102-07	s	2SC2223
2) Q18	8-729-201-26	s	2SC2715
Q25	8-729-201-27	s	2SC2715-Y
Q601	8-729-201-27	s	2SC2715-Y
Q602	8-729-312-22	s	2SA1122
Q603	8-729-201-27	s	2SC2715-Y
Q604	8-729-201-27	s	2SC2715-Y
Q605	8-729-201-27	s	2SC2715-Y
R3	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R4	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R5	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1) R6	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
2) R6	1-216-654-11	s	METAL CHIP 1.3k 0.50% 1/10W
R14	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R15	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
1) R18	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
2) R18	1-216-638-11	s	METAL CHIP 300 0.50% 1/10W
R22	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R23	1-216-644-11	s	METAL CHIP 510 0.50% 1/10W
R27	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
1) R29	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
2) R29	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R30	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R31	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
1) R33	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
2) R33	1-216-654-11	s	METAL CHIP 1.3k 0.50% 1/10W
R39	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R40	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R41	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
1) R42	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
2) R42	1-216-654-11	s	METAL CHIP 1.3k 0.50% 1/10W
R48	1-126-645-11	s	METAL CHIP 560 0.50% 1/10W
R49	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R52	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R53	1-126-645-11	s	METAL CHIP 560 0.50% 1/10W
R54	1-216-615-11	s	METAL CHIP 33 0.50% 1/10W
R55	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
1) R56	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
2) R56	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
1) R57	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
2) R57	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
1) R58	1-216-666-11	s	METAL CHIP 4.3k 0.50% 1/10W
2) R58	1-216-619-11	s	METAL CHIP 22 0.50% 1/10W
1) R59	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
2) R59	1-216-611-11	s	METAL CHIP 22 0.50% 1/10W
R60	1-216-687-11	s	METAL CHIP 33k 0.50% 1/10W
R61	1-216-645-11	s	METAL CHIP 560 0.50% 1/10W
R62	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
1) R64	1-216-646-11	s	METAL CHIP 620 0.50% 1/10W
1) R65	1-216-627-11	s	METAL CHIP 100 0.50% 1/10W
2) R65	1-216-634-11	s	METAL CHIP 200 0.50% 1/10W
R70	1-247-887-11	s	CARBON 220k 5% 1/4W
1) R71	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
2) R71	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
1) R72	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
2) R72	1-216-631-11	s	METAL CHIP 150 0.50% 1/10W
1) R73	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
2) R73	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W

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Ref.No.	Parts No.	SP	Description		
1) R74	1-216-666-11	s	METAL CHIP 4.3k	0.50%	1/10W
2) R74	1-216-619-11	s	METAL CHIP 22	0.50%	1/10W
1) R75	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
2) R75	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
2) R77	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
R86	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
R87	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R96	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R97	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R98	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R99	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
1) R100	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
2) R100	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R101	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
1) R102	1-216-693-11	s	METAL CHIP 56k	0.50%	1/10W
2) R102	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R103	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
2) R104	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
2) R105	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
2) R106	1-216-685-11	s	METAL CHIP 27k	0.50%	1/10W
1) R107	1-216-668-11	s	METAL CHIP 5.1k	0.50%	1/10W
2) R107	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R108	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R119	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
R120	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
R121	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R122	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R123	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R124	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R125	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R127	1-216-692-11	s	METAL CHIP 51k	0.50%	1/10W
R128	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R129	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R156	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R157	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R158	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R162	1-216-693-11	s	METAL CHIP 56k	0.50%	1/10W
R163	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W
R164	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R167	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R168	1-216-699-11	s	METAL CHIP 100k	0.50%	1/10W
1) R170	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
2) R170	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
1) R172	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
2) R172	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R180	1-216-687-11	s	METAL CHIP 33k	0.50%	1/10W
R181	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R182	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R183	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R187	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
R188	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
1) R189	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
2) R189	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
1) R190	1-216-657-11	s	METAL CHIP 1.8k	0.50%	1/10W
2) R190	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
1) R191	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
2) R191	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
1) R192	1-216-657-11	s	METAL CHIP 1.8k	0.50%	1/10W
2) R192	1-216-619-11	s	METAL CHIP 22	0.50%	1/10W
1) R193	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W

Ref.No.	Parts No.	SP	Description		
2) R193	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
1) R195	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
2) R195	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
1) R196	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
2) R196	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R210	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R211	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R212	1-216-629-11	s	METAL CHIP 120	0.50%	1/10W
R213	1-216-629-11	s	METAL CHIP 120	0.50%	1/10W
R232	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
1) R233	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
2) R233	1-216-657-11	s	METAL CHIP 1.8k	0.50%	1/10W
R234	1-216-657-11	s	METAL CHIP 1.8k	0.50%	1/10W
1) R235	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
4) R235	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
1) R236	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
2) R236	1-216-668-11	s	METAL CHIP 5.1k	0.50%	1/10W
R237	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R238	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R239	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R244	1-216-692-11	s	METAL CHIP 51k	0.50%	1/10W
1) R350	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R351	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
1) R352	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
2) R352	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
1) R353	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
2) R353	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R354	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
1) R355	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
2) R355	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R356	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
2) R357	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R358	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R359	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
2) R360	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R501	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R503	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R505	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R508	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R509	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R510	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R511	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R512	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R513	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R514	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R522	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R523	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R524	1-216-629-11	s	METAL CHIP 120	0.50%	1/10W
R525	1-216-629-11	s	METAL CHIP 120	0.50%	1/10W
1) R601	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
2) R601	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R603	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R604	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R605	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R608	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R609	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R610	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R611	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R612	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R613	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W

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Ref.No.	Parts No.	SP	Description		
R614	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R615	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R617	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R619	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R620	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
2) R621	1-216-634-11	s	METAL CHIP 200	0.50%	1/10W
2) R622	1-216-666-11	s	METAL CHIP 4.3k	0.50%	1/10W
R701	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R702	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R703	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R704	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R705	1-216-685-11	s	METAL CHIP 27k	0.50%	1/10W
R706	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
R707	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R708	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R709	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R710	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R711	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R712	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R713	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R714	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R719	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R721	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R722	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R723	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R724	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W

Ref.No.	Parts No.	SP	Description	
1) RV1	1-237-515-21	s	VAR, CERMET	1k
2) RV1	1-237-512-21	s	VAR, CERMET	100
RV2	1-237-503-21	s	VAR, CERMET	10k
RV4	1-237-514-21	s	VAR, CERMET	500
1) RV5	1-237-514-21	s	VAR, CERMET	500
RV6	1-237-503-21	s	VAR, CERMET	10k
2) RV7	1-237-514-21	s	VAR, CERMET	500
RV12	1-237-515-21	s	VAR, CERMET	1k
RV13	1-237-518-21	s	VAR, CERMET	10k
RV14	1-237-514-21	s	VAR, CERMET	500
RV17	1-237-518-21	s	VAR, CERMET	10k
RV19	1-237-517-21	s	VAR, CERMET	5k
RV20	1-237-516-21	s	VAR, CERMET	2k
RV21	1-237-518-21	s	VAR, CERMET	10k
RV22	1-237-517-21	s	VAR, CERMET	5k
RV25	1-237-519-21	s	VAR, CERMET	20k
RV26	1-237-520-21	s	VAR, CERMET	50k
RV27	1-237-518-21	s	VAR, CERMET	10k
RV28	1-237-517-21	s	VAR, CERMET	5k
RV30	1-237-503-21	s	VAR, CERMET	10k
RV31	1-237-530-21	s	VAR, CERMET	10k
1) RV32	1-237-514-21	s	VAR, CERMET	2k
1) RV33	1-237-514-21	s	VAR, CERMET	2k
2) RV33	1-237-512-21	s	VAR, CERMET	100
1) RV34	1-237-541-21	s	VAR, CERMET	500
2) RV34	1-237-512-21	s	VAR, CERMET	100
RV35	1-230-838-11	s	VAR, METAL FILM	200
1) RV36	1-237-512-21	s	VAR, CERMET	100
2) RV36	1-230-838-11	s	VAR, METAL FILM	200
RV40	1-237-503-21	s	VAR, CERMET	10k

Ref.No.	Parts No.	SP	Description	
1) RV41	1-237-514-21	s	VAR, CERMET	500
2) RV41	1-230-838-11	s	VAR, METAL FILM	200
1) RV42	1-237-515-21	s	VAR, CERMET	1k
2) RV42	1-230-838-11	s	VAR, METAL FILM	200
RV203	1-237-501-21	s	VAR, CERMET	2k
17) RV350	1-237-514-21	s	VAR, CERMET	500
RV501	1-237-518-21	s	VAR, CERMET	10k
RV502	1-237-505-21	s	VAR, CERMET	50k
1) RV601	1-237-518-21	s	VAR, CERMET	10k
RV602	1-237-505-21	s	VAR, CERMET	50k
RV701	1-237-517-11	s	VAR, CERMET	5k
RV702	1-237-517-11	s	VAR, CERMET	5k
RV703	1-237-517-11	s	VAR, CERMET	5k
S1	1-571-259-11	s	SLIDE	
S2	1-571-259-11	s	SLIDE	
TH1	1-800-202-XX	s	S-10K	
TH2	1-800-202-XX	s	S-10K	
4) TH201	1-800-202-XX	s	S-10K	
11) TH201	1-800-200-00	s	S-3K	
X1	1-577-295-11	s	17.734475MHz	
X201	1-577-295-11	s	17.734475MHz	

13) **EQ-26 BOARD**

All the component parts on the EQ-26 board are supplied together when you order the DM-56P board.

1-628-676-11	o	PRINTED CIRCUIT BOARD, EQ-26	
CN1	1-566-473-11	o	PIN, SOCKET 1P
CN2	1-566-473-11	o	PIN, SOCKET 1P
CN3	1-566-473-11	o	PIN, SOCKET 1P
CN4	1-566-473-11	o	PIN, SOCKET 1P
CN5	1-566-473-11	o	PIN, SOCKET 1P
CN6	1-566-473-11	o	PIN, SOCKET 1P
15) CN7	1-566-473-11	o	PIN, SOCKET 1P
15) CN8	1-566-473-11	o	PIN, SOCKET 1P
Q1	8-729-102-08	s	2SC2223-F14
Q2	8-729-102-08	s	2SC2223-F14
Q3	8-729-102-08	s	2SC2223-F14
Q4	8-729-102-08	s	2SC2223-F14
Q5	8-729-102-08	s	2SC2223-F14
Q6	8-729-102-08	s	2SC2223-F14
Q7	8-729-102-08	s	2SC2223-F14
Q8	8-729-102-08	s	2SC2223-F14

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
RV1	1-228-457-00	s	VAR, CERMET 2k
RV2	1-228-457-00	s	VAR, CERMET 2k
RV3	1-228-457-00	s	VAR, CERMET 2k
RV4	1-228-457-00	s	VAR, CERMET 2k
RV5	1-228-457-00	s	VAR, CERMET 2k
RV6	1-228-457-00	s	VAR, CERMET 2k
RV7	1-228-457-00	s	VAR, CERMET 2k
RV8	1-228-457-00	s	VAR, CERMET 2k

13) **EQ-28 BOARD**

All the component parts on the EQ-28 board are supplied together when you order the DM-56P board.

	1-628-975-11	o	PRINTED CIRCUIT BOARD, EQ-28
CN1	1-566-473-11	o	PIN, SOCKET 1P
CN2	1-566-473-11	o	PIN, SOCKET 1P
CN3	1-566-473-11	o	PIN, SOCKET 1P
CN4	1-566-473-11	o	PIN, SOCKET 1P
CN5	1-566-473-11	o	PIN, SOCKET 1P
CN6	1-566-473-11	o	PIN, SOCKET 1P
15) CN7	1-566-473-11	o	PIN, SOCKET 1P
15) CN8	1-566-473-11	o	PIN, SOCKET 1P
Q1	8-729-102-08	s	2SC2223-F14
Q2	8-729-102-08	s	2SC2223-F14
Q3	8-729-102-08	s	2SC2223-F14
Q4	8-729-102-08	s	2SC2223-F14
Q5	8-729-102-08	s	2SC2223-F14
Q6	8-729-102-08	s	2SC2223-F14
Q7	8-729-102-08	s	2SC2223-F14
Q8	8-729-102-08	s	2SC2223-F14
RV1	1-228-457-00	s	VAR, CERMET 2k
RV2	1-228-457-00	s	VAR, CERMET 2k
RV3	1-228-457-00	s	VAR, CERMET 2k
RV4	1-228-457-00	s	VAR, CERMET 2k
RV5	1-228-457-00	s	VAR, CERMET 2k
RV6	1-228-457-00	s	VAR, CERMET 2k
RV7	1-228-457-00	s	VAR, CERMET 2k
RV8	1-228-457-00	s	VAR, CERMET 2k

EX-116 BOARD

	A-6729-474-A	s	MOUNTED CIRCUIT BOARD, EX-116
5)	1-506-748-21	o	DIN 96P
6) CN1	1-506-748-11	o	DIN 96P
6) CN2	1-506-748-11	o	DIN 96P
5)	1-563-341-21	o	HOUSING, DIN 96P
6) CN3	1-563-341-11	o	HOUSING, DIN 96P
6) CN4	1-563-341-11	o	HOUSING, DIN 96P

Ref.No.	Parts No.	SP	Description

EX-134 BOARD

	A-6729-475-A	s	MOUNTED CIRCUIT BOARD, EX-134
5)	1-506-748-21	o	DIN 96P
6) CN1	1-506-748-11	o	DIN 96P
5)	1-563-341-21	o	HOUSING, DIN 96P
6) CN2	1-563-341-11	o	HOUSING, DIN 96P

EX-151 BOARD

	A-6729-476-A	s	MOUNTED CIRCUIT BOARD, EX-151
5)	1-506-748-21	o	DIN 96P
6) CN1	1-506-748-11	o	DIN 96P
5)	1-506-746-21	o	DIN 48P
6) CN2	1-506-746-11	o	DIN 48P
5)	1-563-341-21	o	HOUSING, DIN 96P
6) CN3	1-563-341-11	o	HOUSING, DIN 96P
	1-563-339-11	o	HOUSING, DIN 48P

FL-61 BOARD

All the component parts on the FL-61 board are supplied together when you order the AFM-1A board.

	1-624-393-11	o	PRINTED CIRCUIT BOARD, FL-61
CN101	1-564-983-11	s	8P
CN102	1-506-653-11	s	5P
FL109	1-236-122-11	s	LOW-PASS 25kHz
R101	1-216-658-11	s	METAL CHIP 2k 0.50% 1/10W
R102	1-216-658-11	s	METAL CHIP 2k 0.50% 1/10W

HC-11 BOARD

	1-622-595-11	o	PRINTED CIRCUIT BOARD, HC-11
CP1	1-548-152-11	o	HOURS METER

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
HP-33 BOARD			
	1-622-590-13	o	PRINTED CIRCUIT BOARD, HP-33
C2	1-124-236-00	s	ELECT 47 20% 16V
C3	1-124-236-00	s	ELECT 47 20% 16V
IC1	8-759-745-56	s	NJM4556D (JRC)
IC2	8-759-900-72	s	NE5532P (SIGNETICS)
J1	1-507-863-31	s	LARGE TYPE
R6	1-247-739-11	s	CARBON 100 5% 1/2W
R10	1-247-739-11	s	CARBON 100 5% 1/2W
KY-96C BOARD			
	All the component parts on the KY-96C board are supplied together when you order the key chassis ass'y.		
C1	1-124-252-00	s	ELECT 0.33 20% 50V
C2	1-124-252-00	s	ELECT 0.33 20% 50V
C13	1-124-462-00	s	ELECT 10 20% 16V
C20	1-124-462-00	s	ELECT 10 20% 16V
C21	1-124-462-00	s	ELECT 10 20% 16V
C22	1-124-462-00	s	ELECT 10 20% 16V
C23	1-124-462-00	s	ELECT 10 20% 16V
C24	1-124-462-00	s	ELECT 10 20% 16V
C25	1-124-462-00	s	ELECT 10 20% 16V
C26	1-124-462-00	s	ELECT 10 20% 16V
C44	1-124-252-00	s	ELECT 0.33 20% 50V
C46	1-124-462-00	s	ELECT 10 20% 16V
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
D4	8-719-109-51	s	RD2.0ES-B2
D5	8-719-109-51	s	RD2.0ES-B2
D6	8-719-109-51	s	RD2.0ES-B2
D7	8-719-109-51	s	RD2.0ES-B2
D8	8-719-109-51	s	RD2.0ES-B2
D9	8-719-109-51	s	RD2.0ES-B2
D10	8-719-109-51	s	RD2.0ES-B2
D11	8-719-911-19	s	1SS119
D12	8-719-911-19	s	1SS119
D13	8-719-911-19	s	1SS119
D14	8-719-911-19	s	1SS119
D15	8-719-911-19	s	1SS119
D16	8-719-911-19	s	1SS119
D17	8-719-911-19	s	1SS119
D18	8-719-911-19	s	1SS119
D31	8-719-911-19	s	1SS119
D32	8-719-911-19	s	1SS119

Ref.No.	Parts No.	SP	Description
D35	8-719-911-19	s	1SS119
D49	8-719-802-11	s	TLUG154
D55	8-719-939-39	s	GL-5HD8
D56	8-719-939-39	s	GL-5HD8
D57	8-719-802-11	s	TLUG154
D58	8-719-939-39	s	GL-5HD8
D59	8-719-802-11	s	TLUG154
IC1	8-759-602-78	s	M5236L (MITSUBISHI)
IC2	8-759-278-05	s	NJM78L05A (JRC)
IC3	8-759-937-29	s	MB88201H-539N (FUJITSU)
IC4	8-759-605-23	s	M50747H-601SP (MITSUBISHI)
IC5	8-759-645-16	s	M54516P (MITSUBISHI)
IC6	8-759-645-16	s	M54516P (MITSUBISHI)
IC7	8-759-645-16	s	M54516P (MITSUBISHI)
IC8	8-759-278-05	s	NJM78L05A (JRC)
L1	1-407-488-00	s	MICRO 470
L2	1-407-488-00	s	MICRO 470
Q2	8-729-275-42	s	2SC2754
Q3	8-729-275-42	s	2SC2754
Q4	8-729-904-51	s	DTB123EK
Q5	8-729-904-51	s	DTB123EK
Q6	8-729-904-51	s	DTB123EK
Q7	8-729-904-51	s	DTB123EK
Q8	8-729-904-51	s	DTB123EK
Q9	8-729-904-51	s	DTB123EK
Q10	8-729-904-51	s	DTB123EK
Q12	8-729-982-22	s	2SB822
Q13	8-729-982-22	s	2SB822
Q14	8-729-982-22	s	2SB822
Q15	8-729-982-22	s	2SB822
Q16	8-729-982-22	s	2SB822
Q17	8-729-982-22	s	2SB822
Q18	8-729-982-22	s	2SB822
Q19	8-729-982-22	s	2SB822
Q20	8-729-900-67	s	DTA124XS
Q21	8-729-900-67	s	DTA124XS
Q22	8-729-900-67	s	DTA124XS
Q23	8-729-900-67	s	DTA124XS
Q24	8-729-900-67	s	DTA124XS
Q25	8-729-900-67	s	DTA124XS
Q26	8-729-900-67	s	DTA124XS
Q27	8-729-900-67	s	DTA124XS
Q28	8-729-900-67	s	DTA124XS
Q29	8-729-900-67	s	DTA124XS
Q30	8-729-900-67	s	DTA124XS
Q31	8-729-900-67	s	DTA124XS
Q32	8-729-900-67	s	DTA124XS
Q33	8-729-900-67	s	DTA124XS
Q34	8-729-199-92	s	2SD999
Q35	8-729-900-51	s	DTA114TK
Q36	8-729-199-92	s	2SD999
Q37	8-729-900-51	s	DTA114TK

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
Q38	8-729-199-92	s	2SD999
Q39	8-729-900-51	s	DTA114TK
Q40	8-729-199-92	s	2SD999
Q41	8-729-900-51	s	DTA114TK
Q42	8-729-199-92	s	2SD999
Q43	8-729-900-51	s	DTA114TK
Q44	8-729-199-92	s	2SD999
Q45	8-729-900-51	s	DTA114TK
Q46	8-729-199-92	s	2SD999
Q81	8-729-271-22	s	2SC2712-G
Q82	8-729-271-22	s	2SC2712-G
Q83	8-729-900-51	s	DTA114TK
Q84	8-729-199-92	s	2SD999
R67	1-247-700-11	s	CARBON 100 5% 1/4W
R68	1-247-700-11	s	CARBON 100 5% 1/4W
R69	1-247-700-11	s	CARBON 100 5% 1/4W
R70	1-247-700-11	s	CARBON 100 5% 1/4W
R71	1-247-700-11	s	CARBON 100 5% 1/4W
S1	1-571-169-11	s	TACTIL
S2	1-571-169-21	s	TACTIL
S3	1-571-167-41	s	TACTIL
S4	1-571-167-31	s	TACTIL
S5	1-571-167-21	s	TACTIL
S6	1-571-167-11	s	TACTIL
S7	1-571-167-11	s	TACTIL
S20	1-516-995-00	s	LEVER SLIDE
X1	1-567-869-11	s	VIBRATOR 9.83MHz
X2	1-567-192-11	s	OSCILLATOR 4.00MHz

KY-107A BOARD

All the component parts on the KY-107A board are supplied together when you order the key chassis ass'y.

	1-622-554-11	o	PRINTED CIRCUIT BOARD, KY-107
S32	1-552-539-00	s	KEY BOARD
S33	1-552-539-00	s	KEY BOARD
S34	1-552-539-00	s	KEY BOARD

Ref.No.	Parts No.	SP	Description
MB-191C BOARD			
19)	A-6725-607-A	o	MOUNTED CIRCUIT BOARD, MB-191C
20)	A-6725-607-B	o	MOUNTED CIRCUIT BOARD, MB-191C
	1-562-210-11	s	CONTACT
5) CN101	1-563-337-31	s	96P
6) CN101	1-565-910-11	s	HOUSING 96P
5) CN102	1-563-337-31	s	96P
6) CN102	1-565-910-11	s	HOUSING 96P
5) CN103	1-563-337-31	s	96P
6) CN103	1-565-910-11	s	HOUSING 96P
5) CN105	1-563-337-31	s	96P
6) CN105	1-565-910-11	s	HOUSING 96P
5) CN106	1-563-335-11	s	48P
6) CN106	1-565-909-11	s	HOUSING 48P
5) CN107	1-563-337-31	s	96P
6) CN107	1-565-910-11	s	HOUSING 96P
5) CN108	1-563-335-11	s	48P
6) CN108	1-565-909-11	s	HOUSING 48P
5) CN109	1-563-337-31	s	96P
6) CN109	1-565-910-11	s	HOUSING 96P
5) CN110	1-563-335-11	s	48P
6) CN110	1-565-909-11	s	HOUSING 48P
5) CN111	1-563-337-31	s	96P
6) CN111	1-565-910-11	s	HOUSING 96P
CN123	1-566-342-11	s	30P
CN125	1-566-392-21	o	4P
CN130	1-564-683-11	o	13P
CN137	1-566-398-21	s	16P
5) CN202	1-563-337-31	s	96P
6) CN202	1-565-910-11	s	HOUSING 96P
5) CN204	1-563-337-31	s	96P
6) CN204	1-565-910-11	s	HOUSING 96P
5) CN205	1-563-337-31	s	96P
6) CN205	1-565-910-11	s	HOUSING 96P
5) CN206	1-563-337-31	s	96P
6) CN206	1-565-910-11	s	HOUSING 96P
5) CN207	1-563-337-31	s	96P
6) CN207	1-565-910-11	s	HOUSING 96P
5) CN208	1-563-337-31	s	96P
6) CN208	1-565-910-11	s	HOUSING 96P
CN211	1-566-312-11	s	50P
CN212	1-566-312-11	s	50P
CN213	1-564-199-00	o	6P
CN214	1-564-201-00	o	10P
CN215	1-566-405-11	o	30P
CN225	1-566-405-11	o	30P
CN236	1-566-392-21	o	4P
CN237	1-566-405-21	o	30P
CN431	1-562-833-11	o	7P
CN432	1-562-800-11	o	9P

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
MB-192 BOARD			
	A-6725-584-A	o	MOUNTED CIRCUIT BOARD, MB-192
5) CN301	1-563-337-31	s	96P
6) CN301	1-565-910-11	s	HOUSING 96P
5) CN302	1-563-337-31	s	96P
6) CN302	1-565-910-11	s	HOUSING 96P
5) CN303	1-563-337-31	s	96P
6) CN303	1-565-910-11	s	HOUSING 96P
CN304	1-563-337-31	s	96P
CN306	1-566-343-11	o	40P
CN307	1-566-496-11	o	50P
CN308	1-566-496-11	o	50P
CN310	1-566-311-11	s	10P
CN316	1-508-906-00	o	10P

19) NR-25 BOARD

All the component parts on the NR-25 Board are supplied together when you order the TBC-8P Board.

	1-624-023-12	o	PRINTED CIRCUIT BOARD, NR-25
C701	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C702	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C703	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C704	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C705	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C706	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C707	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C708	1-163-033-00	s	CERAMIC CHIP 0.022 50V
C709	1-163-033-00	s	CERAMIC CHIP 0.022 50V
CN700	1-564-410-11	s	HEADER 40P
CN701	1-559-614-11	o	FLAT CABLE (40 CORE)
IC701	8-759-947-00	s	CXD1328Q (SONY)
IC702	8-752-322-72	s	CXK1202S (SONY)
IC703	8-752-322-72	s	CXK1202S (SONY)
IC704	8-752-322-72	s	CXK1202S (SONY)
IC705	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC706	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC707	8-751-205-22	s	TC74HC240F (TOSHIBA)
IC708	8-759-205-30	s	TC74HC273F (TOSHIBA)
IC709	8-759-207-25	s	TC74HC163F (TOSHIBA)

Ref.No.	Parts No.	SP	Description
20) NR-32 BOARD			
	All the component parts on the NR-32 board are supplied together when you order the TBC-12P board.		
	1-629-463-11	o	PRINTED CIRCUIT BOARD, NR-32
C701	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C702	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C703	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C704	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C705	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C706	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C707	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C708	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C709	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C710	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C712	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C713	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C714	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C715	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C716	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C717	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C720	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C721	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C722	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C723	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C724	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C725	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C727	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C729	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C730	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
CP701	1-567-979-11	s	CRYSTAL VCO 27MHz
CP702	1-577-134-11	s	CRYSTAL VCO 13.5MHz
CV701	1-141-320-00	s	TRIMMER, CERAMIC 45pF
IC701	8-759-947-00	s	CXD1328Q (SONY)
IC702	8-752-322-72	s	CXK1202S (SONY)
IC703	8-752-322-72	s	CXK1202S (SONY)
IC704	8-752-322-72	s	CXK1202S (SONY)
IC705	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC706	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC707	8-759-205-22	s	TC74HC240F (TOSHIBA)
IC708	8-759-203-21	s	TC74HC273P (TOSHIBA)
IC709	8-759-205-16	s	TC74HC161P (TOSHIBA)
IC710	8-759-918-71	s	CX23065 (TOSHIBA)
IC711	8-759-918-71	s	CX23065 (TOSHIBA)
IC712	8-759-904-80	s	74F04PC (FSC)
IC713	8-759-904-84	s	74F74PC (FSC)
IC714	8-759-230-23	s	CXD1045AQ (SONY)
IC715	8-759-230-23	s	CXD1045AQ (SONY)
IC716	8-759-907-81	s	SN74LS221NS (TI)
IC717	8-759-904-83	s	74F32PC (FSC)
IC718	8-759-906-71	s	74F175PC (FSC)
IC719	8-759-915-93	s	74F163APC (FSC)
IC720	8-759-925-90	s	SN74HC74NS (TI)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
IC721	8-759-930-57	s	SN74LS164NS (TI)
IC725	8-759-901-58	s	SN74LS158N (TI)
IC726	8-759-930-57	s	SN74LS164NS (TI)
R748	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R749	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
RV701	1-230-521-11	s	VAR, METAL 2.2k
RV702	1-230-521-11	s	VAR, METAL 2.2k

3) **PC-32 BOARD**

	1-622-603-11	o	PRINTED CIRCUIT BOARD, PC-32
D1	8-719-800-81	s	TLP801A

PC-33 BOARD

	1-622-604-11	o	PRINTED CIRCUIT BOARD, PC-33
D1	8-719-800-81	s	TLP801A

PC-41 BOARD

	1-623-267-11	o	PRINTED CIRCUIT BOARD, PC-41
D1	8-719-800-81	s	TLP801A

4) **PC-47 BOARD**

	1-628-786-11	o	PRINTED CIRCUIT BOARD, PC-47
D1	8-719-800-81	s	TLP801A

PD-35 BOARD

	1-622-596-11	o	PRINTED CIRCUIT BOARD, PD-35
CN852	1-508-900-00	o	PIN 2P

Ref.No.	Parts No.	SP	Description

PT-9 BOARD

All the component parts on the PT-9 board are supplied together when you order the key chassis ass'y.

	1-605-018-11	o	PRINTED CIRCUIT BOARD, PT-9
Q1	8-729-882-52	s	2SB825-R

PTC-15 BOARD

	1-622-597-11	o	PRINTED CIRCUIT BOARD, PTC-15
D1	8-719-800-81	s	TLP801A
D2	8-719-800-81	s	TLP801A

PTC-20 BOARD

	1-622-598-11	o	PRINTED CIRCUIT BOARD, PTC-20
Q1	8-729-116-45	s	PH110
Q2	8-729-116-45	s	PH110
Q3	8-729-116-45	s	PH110

PTC-21 BOARD

	1-622-599-11	o	PRINTED CIRCUIT BOARD, PTC-21
D1	8-719-800-81	s	TLP801A
D2	8-719-800-81	s	TLP801A

PTC-31 BOARD

	1-622-607-11	o	PRINTED CIRCUIT BOARD, PTC-31
D1	8-719-941-47	s	GP-2S05

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
PTC-32 BOARD			
All the component parts on the PTC-32 board are supplied together when you order the key chassis ass'y.			
	1-622-638-11	o	PRINTED CIRCUIT BOARD, PTC-32
C1	1-124-234-00	s	ELECT 22 20% 10V
CN4	1-562-151-11	o	6P
	1-564-026-00	s	CONTACT, RECEPTACLE
IC1	8-719-939-50	s	GP-1L52 (SHARP)
IC2	8-719-939-50	s	GP-1L52 (SHARP)
IC3	8-719-940-86	s	GP-1L53 (SHARP)
IC4	8-719-939-50	s	GP-1L52 (SHARP)
IC5	8-759-133-90	s	uPC339C (NEC)
PTC-36 BOARD			
	1-622-601-11	o	PRINTED CIRCUIT BOARD, PTC-36
D1	8-719-123-69	s	SE310
D2	8-719-123-69	s	SE310
D3	8-719-123-69	s	SE310
RE-28 BOARD			
⚠	A-6715-354-A	o	MOUNTED CIRCUIT BOARD, RE-28
C9	1-124-360-00	s	ELECT 1000 20% 16V
CN814	1-508-901-00	o	M 3P
CN823	1-508-949-00	o	M 12P
D1	8-719-200-02	s	10E2
IC1	8-759-108-77	s	CX877 (SONY)
Q1	8-729-177-43	s	2SD774
Q2	8-729-376-84	s	2SA768-Y
Q3	8-729-177-43	s	2SD774
Q4	8-729-247-33	s	2SA473
Q5	8-729-103-43	s	2SB734*(28)
Q6	8-729-177-43	s	2SD774

Ref.No.	Parts No.	SP	Description			
R1	1-247-887-00	s	CARBON	220k	5%	1/4W
⚠R5	1-216-389-11	s	METAL OXIDE	1	5%	3W
R10	1-215-866-11	s	METAL OXIDE	330	5%	1W
R12	1-247-887-00	s	CARBON	220k	5%	1/4W
⚠R13	1-216-386-11	s	METAL OXIDE	0.56	5%	3W
R14	1-247-739-11	s	CARBON	100	5%	1/2W
R15	1-247-739-11	s	CARBON	100	5%	1/2W
⚠R16	1-216-389-11	s	METAL OXIDE	1	5%	3W
RE-36 BOARD						
⚠	A-6715-361-A	o	MOUNTED CIRCUIT BOARD, RE-36			
C103	1-162-726-11	s	CERAMIC	470pF	1%	50V
C104	1-162-726-11	s	CERAMIC	470pF	1%	50V
C106	1-124-462-00	s	ELECT	10	20%	16V
C203	1-162-726-11	s	CERAMIC	470pF	1%	50V
C204	1-162-726-11	s	CERAMIC	470pF	1%	50V
C206	1-124-462-00	s	ELECT	10	20%	16V
CN802	1-563-233-11	o	F.P.C 13P			
CN805	1-562-708-11	o	SOCKET 13P			
CN806	1-508-901-00	o	M 3P			
2) CN807	1-506-477-11	o	12P			
D1	8-719-200-02	s	10E2			
D2	8-719-200-02	s	10E2			
IC101	8-759-705-62	s	NJM4562D-D (JRC)			
IC201	8-759-705-62	s	NJM4562D-D (JRC)			
L1	1-459-155-00	s	45 (WITH CORE)			
L2	1-459-155-00	s	45 (WITH CORE)			
Q1	8-729-114-11	s	2SA1141			
Q2	8-729-177-43	s	2SD774			
Q3	8-729-103-43	s	2SB734*(28)			
Q4	8-729-102-57	s	2SC3012			
Q101	8-729-217-33	s	2SC1173			
Q102	8-729-247-33	s	2SA473			
Q201	8-729-217-33	s	2SC1173			
Q202	8-729-247-33	s	2SA473			

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
R1	1-249-417-11	s	CARBON 1k 5% 1/4W
⚠R2	1-215-864-00	s	METAL OXIDE 150 5% 1W
R5	1-215-889-00	s	METAL OXIDE 330 5% 2W
R101	1-215-863-11	s	METAL OXIDE 100 5% 1W
R102	1-215-863-11	s	METAL OXIDE 100 5% 1W
⚠R103	1-216-365-00	s	METAL OXIDE 0.47 5% 2W
R108	1-247-895-00	s	CARBON 470k 5% 1/4W
R111	1-247-895-00	s	CARBON 470k 5% 1/4W
8) R113	1-247-887-00	s	CARBON 220k 5% 1/4W
⚠R201	1-215-863-11	s	METAL OXIDE 100 5% 1W
⚠R202	1-215-863-11	s	METAL OXIDE 100 5% 1W
R203	1-216-365-00	s	METAL OXIDE 0.47 5% 2W
R208	1-247-895-00	s	CARBON 470k 5% 1/4W
R211	1-247-895-00	s	CARBON 470k 5% 1/4W
8) R213	1-247-887-00	s	CARBON 220k 5% 1/4W

RM-40 BOARD

	1-622-605-11	o	PRINTED CIRCUIT BOARD, RM-40
C1	1-102-363-00	s	CERAMIC 0.001 50V
C2	1-102-363-00	s	CERAMIC 0.001 50V
CN3	1-562-708-11	o	13P

RM-57 BOARD

	1-624-153-13	o	PRINTED CIRCUIT BOARD, RM-57
C1	1-124-120-11	s	ELECT 220 20% 16V
CN450	1-559-263-11	o	WIRE ASS'Y, FLAT TYPE (40 CORE)
CN451	1-564-743-11	o	13P
CN452	1-508-933-00	o	2P
CN453	1-561-028-00	s	36P
CN454	1-563-890-11	s	SOCKET, D-SUB 9P
CN455	1-563-890-11	s	SOCKET, D-SUB 9P
CN456	1-566-441-11	s	D-SUB 15P
FB1	1-535-178-00	s	FERRITE BEAD
FB2	1-535-178-00	s	FERRITE BEAD

Ref.No.	Parts No.	SP	Description
⚠R1	1-215-906-11	s	METAL OXIDE 15 5% 3W

SE-57 BOARD

	A-6715-353-A	o	MOUNTED CIRCUIT BOARD, SE-57
C1	1-162-726-11	s	CERAMIC 470pF 1% 50V
C2	1-162-726-11	s	CERAMIC 470pF 1% 50V
C3	1-136-683-11	s	MYLAR 0.0056 2% 100V
D1	8-719-911-19	s	1SS119
D2	8-719-911-19	s	1SS119
D3	8-719-911-19	s	1SS119
IC1	8-759-729-03	s	NJM2903D (JRC)
IC2	8-759-245-38	s	TC4538BP (TOSHIBA)
IC3	8-759-145-58	s	uPC4558C (NEC)
Q1	8-729-801-72	s	2SC2603-E
Q2	8-729-217-33	s	2SC1173
Q3	8-729-247-33	s	2SA473
Q4	8-729-801-72	s	2SC2603-E
Q5	8-729-117-54	s	2SA1175
Q6	8-729-801-72	s	2SC2603-E
Q7	8-729-801-72	s	2SC2603-E
R5	1-247-895-00	s	CARBON 470k 5% 1/4W
R14	1-247-887-00	s	CARBON 220k 5% 1/4W
R15	1-247-887-00	s	CARBON 220k 5% 1/4W
R29	1-216-347-11	s	METAL OXIDE 0.68 5% 1W
R30	1-216-347-11	s	METAL OXIDE 0.68 5% 1W

SV-82A BOARD

IC109	8-759-734-36	a	C256A-BVW75P V1.20SV
	A-6715-394-A	o	MOUNTED CIRCUIT BOARD, SV-82A
C1	1-162-887-11	s	CERAMIC 470pF 5% 50V
C2	1-162-887-11	s	CERAMIC 470pF 5% 50V
C7	1-162-887-11	s	CERAMIC 470pF 5% 50V
C9	1-162-887-11	s	CERAMIC 470pF 5% 50V
C106	1-124-598-11	s	ELECT 22 20% 25V
C110	1-124-598-11	s	ELECT 22 20% 25V
C111	1-124-462-00	s	ELECT 10 20% 16V
C112	1-124-462-00	s	ELECT 10 20% 16V
C125	1-161-463-00	s	CERAMIC 220pF 5% 50V
C127	1-161-463-00	s	CERAMIC 220pF 5% 50V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
C128	1-161-463-00	s	CERAMIC 220pF 5% 50V
C131	1-162-883-11	s	CERAMIC 220pF 5% 50V
C308	1-124-224-00	s	ELECT 47 20% 6.3V
C309	1-124-224-00	s	ELECT 47 20% 6.3V
C310	1-124-236-00	s	ELECT 47 20% 10V
C311	1-124-236-00	s	ELECT 47 20% 10V
5) CN206	1-506-748-31	s	DIN 96P
6) CN206	1-506-748-11	s	DIN 96P
6) D1	8-719-911-19	s	1SS119
6) D2	8-719-911-19	s	1SS119
D101	8-719-911-19	s	1SS119
D102	8-719-911-19	s	1SS119
D103	8-719-911-19	s	1SS119
D104	8-719-911-19	s	1SS119
D105	8-719-911-19	s	1SS119
D106	8-719-911-19	s	1SS119
D107	8-719-911-19	s	1SS119
D108	8-719-911-19	s	1SS119
D109	8-719-911-19	s	1SS119
D110	8-719-911-19	s	1SS119
D111	8-719-911-19	s	1SS119
D114	8-719-911-19	s	1SS119
IC1	8-759-112-43	s	uPD71054G (NEC)
IC2	8-759-112-43	s	uPD71054G (NEC)
IC4	8-759-112-43	s	uPD71054G (NEC)
IC5	8-759-112-43	s	uPD71054G (NEC)
IC6	8-759-938-83	s	CF77074NT (TI)
IC7	8-759-938-83	s	CF77074NT (TI)
IC8	8-759-938-83	s	CF77074NT (TI)
IC9	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC10	8-759-926-97	s	SN74HC4024NS (TI)
IC11	8-759-205-00	s	TC74HC14F (TOSHIBA)
IC12	8-759-205-00	s	TC74HC14F (TOSHIBA)
IC101	8-759-926-49	s	SN74HC245NS (TI)
IC102	8-759-205-23	s	TC74HC244F (TOSHIBA)
IC103	8-759-208-09	s	TC4052BFHB (TOSHIBA)
IC104	8-759-204-97	s	TC74HCU04F (TOSHIBA)
IC105	8-752-323-64	s	CXK5816M-12L (SONY)
IC106	8-759-205-09	s	TC74HC138F (TOSHIBA)
IC107	8-759-205-09	s	TC74HC138F (TOSHIBA)
IC108	8-759-205-10	s	TC74HC139F (TOSHIBA)
IC110	8-759-205-20	s	TC74HC193F (TOSHIBA)
IC111	8-759-113-03	s	uPD78310CW (NEC)
IC112	8-759-926-98	s	SN74HC4040NS (TI)
IC113	8-759-103-95	s	uPC648C (NEC)
IC114	8-759-908-92	s	TL084CNS (TI)
IC116	8-759-908-92	s	TL084CNS (TI)
IC117	8-759-908-92	s	TL084CNS (TI)
IC118	8-759-208-15	s	TC4066BFHB (TOSHIBA)
IC119	8-759-208-15	s	TC4066BFHB (TOSHIBA)
IC120	8-759-938-68	s	CXD1095Q (SONY)
IC121	8-759-708-09	s	NJM78L09A (JRC)
IC122	8-759-204-98	s	TC74HC08F (TOSHIBA)

Ref.No.	Parts No.	SP	Description
L1	1-410-476-11	s	MICRO 33
L2	1-410-476-11	s	MICRO 33
L3	1-410-476-11	s	MICRO 33
L4	1-410-476-11	s	MICRO 33
Q1	8-729-600-27	s	2SC634SP
Q2	8-729-600-27	s	2SC634SP
Q3	8-729-600-27	s	2SC634SP
R1	1-247-887-00	s	CARBON 220k 5% 1/4W
R3	1-247-887-00	s	CARBON 220k 5% 1/4W
R5	1-247-887-00	s	CARBON 220k 5% 1/4W
R7	1-247-887-00	s	CARBON 220k 5% 1/4W
R19	1-247-887-00	s	CARBON 220k 5% 1/4W
R170	1-247-887-00	s	CARBON 220k 5% 1/4W
R172	1-247-887-00	s	CARBON 220k 5% 1/4W
R182	1-217-666-91	s	SHORT 0.01
R183	1-217-666-91	s	SHORT 0.01
RB101	1-231-557-00	s	100k x 4
RV101	1-237-515-21	s	VAR, CERMET 1k
RV102	1-237-505-21	s	VAR, CERMET 50k
RV103	1-237-505-21	s	VAR, CERMET 50k
RV104	1-237-520-21	s	VAR, CERMET 50k
S101	1-553-572-00	s	DIP (PIANO TYPE)
X101	1-567-865-11	s	VIBRATOR 12.00MHz

SV-83B BOARD

	A-6715-403-A	o	MOUNTED CIRCUIT BOARD, SV-83B
C1	1-124-236-00	s	ELECT 47 20% 10V
C2	1-124-236-00	s	ELECT 47 20% 10V
C3	1-162-879-21	s	CERAMIC 100pF 5% 50V
C6	1-162-879-21	s	CERAMIC 100pF 5% 50V
C12	1-162-879-21	s	CERAMIC 100pF 5% 50V
C15	1-124-224-00	s	ELECT 47 20% 6.3V
C16	1-124-224-00	s	ELECT 47 20% 6.3V
C31	1-124-236-00	s	ELECT 47 20% 10V
C32	1-124-236-00	s	ELECT 47 20% 10V
C201	1-124-236-00	s	ELECT 47 20% 10V
C202	1-124-462-00	s	ELECT 10 20% 16V
C203	1-124-234-00	s	ELECT 22 20% 16V
C208	1-162-885-11	s	CERAMIC 330pF 5% 50V
C212	1-162-885-11	s	CERAMIC 330pF 5% 50V
C219	1-161-463-00	s	CERAMIC 220pF 5% 50V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
C221	1-162-887-11	s	CERAMIC 470pF 5% 50V
C309	1-124-236-00	s	ELECT 47 20% 10V
C310	1-124-236-00	s	ELECT 47 20% 10V
C311	1-124-236-00	s	ELECT 47 20% 10V
C312	1-124-236-00	s	ELECT 47 20% 10V
5) CN207	1-506-748-31	s	DIN 96P
6) CN207	1-506-748-11	s	DIN 96P
D5	8-719-911-19	s	1SS119
D6	8-719-911-19	s	1SS119
D7	8-719-911-19	s	1SS119
D8	8-719-911-19	s	1SS119
D201	8-719-911-19	s	1SS119
IC1	8-759-132-40	s	uPC324C (NEC)
IC2	8-759-908-92	s	TL084CNS (TI)
IC3	8-759-908-92	s	TL084CNS (TI)
IC4	8-759-700-58	s	NJM4558D-FA (JRC)
IC5	8-759-908-92	s	TL084CNS (TI)
IC6	8-759-908-92	s	TL084CNS (TI)
IC7	8-759-700-07	s	NJM2903M (JRC)
IC8	8-759-700-07	s	NJM2903M (JRC)
IC10	8-759-910-43	s	CX23028 (SONY)
IC11	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC201	8-743-915-10	s	BX3915A (SONY)
IC202	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC203	8-759-200-90	s	TC4538BF (TOSHIBA)
IC204	8-759-205-78	s	TC504013BF (TOSHIBA)
IC205	8-759-200-84	s	TC4081BF (TOSHIBA)
IC206	8-759-700-07	s	NJM2903M (JRC)
IC207	8-759-200-90	s	TC4538BF (TOSHIBA)
IC208	8-759-204-20	s	TC4024BF (TOSHIBA)
IC209	8-759-204-20	s	TC4024BF (TOSHIBA)
IC210	8-759-700-07	s	NJM2903M (JRC)
IC211	8-759-200-68	s	TC4011BF (TOSHIBA)
IC212	8-759-200-68	s	TC4011BF (TOSHIBA)
IC213	8-759-205-78	s	TC504013BF (TOSHIBA)
IC214	8-759-200-90	s	TC4538BF (TOSHIBA)
IC215	8-759-200-90	s	TC4538BF (TOSHIBA)
IC216	8-759-205-78	s	TC504013BF (TOSHIBA)
IC217	8-759-205-78	s	TC504013BF (TOSHIBA)
IC218	8-759-200-90	s	TC4538BF (TOSHIBA)
IC219	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC220	8-759-205-15	s	TC74HC160F (TOSHIBA)
	8-759-205-16	s	TC74HC161F (TOSHIBA)
IC221	8-759-200-78	s	TC4030BF (TOSHIBA)
L1	1-410-476-11	s	MICRO 33
L2	1-410-476-11	s	MICRO 33
L3	1-410-476-11	s	MICRO 33
L4	1-410-476-11	s	MICRO 33
Q2	8-729-201-04	s	2SC2878
Q3	8-729-201-04	s	2SC2878
Q4	8-729-201-04	s	2SC2878
Q5	8-729-201-04	s	2SC2878
Q8	8-729-201-04	s	2SC2878

Ref.No.	Parts No.	SP	Description
Q9	8-729-611-53	s	2SA1115-F
R21	1-247-883-00	s	CARBON 150k 5% 1/4W
R129	1-247-887-00	s	CARBON 220k 5% 1/4W
R132	1-247-883-00	s	CARBON 150k 5% 1/4W
R133	1-247-883-00	s	CARBON 150k 5% 1/4W
R215	1-247-883-00	s	CARBON 150k 5% 1/4W
R222	1-247-883-00	s	CARBON 150k 5% 1/4W
R257	1-247-887-00	s	CARBON 220k 5% 1/4W
R262	1-217-666-31	s	SHORT 0.01 1/6W
R264	1-217-666-31	s	SHORT 0.01 1/6W
R265	1-217-666-31	s	SHORT 0.01 1/6W
RV1	1-230-838-11	s	VAR, METAL FILM 200
RV2	1-237-512-21	s	VAR, CERMET 100
RV3	1-237-520-21	s	VAR, CERMET 50k
RV4	1-237-518-21	s	VAR, CERMET 10k
RV8	1-237-521-21	s	VAR, CERMET 20k
RV9	1-237-518-21	s	VAR, CERMET 10k
RV10	1-237-518-21	s	VAR, CERMET 10k
RV11	1-237-518-21	s	VAR, CERMET 10k
RV12	1-237-518-21	s	VAR, CERMET 10k
RV13	1-237-518-21	s	VAR, CERMET 10k
RV15	1-237-521-21	s	VAR, CERMET 100k
RV16	1-237-521-21	s	VAR, CERMET 100k
RV201	1-237-521-21	s	VAR, CERMET 100k
RV202	1-237-521-21	s	VAR, CERMET 100k
RV205	1-237-521-21	s	VAR, CERMET 100k
RV206	1-237-522-21	s	VAR, CERMET 200k
RV210	1-237-520-21	s	VAR, CERMET 50k
S1	1-552-509-00	s	DIP
	1-571-259-11	s	SLIDE

SV-84P BOARD

	A-6715-386-A	o	MOUNTED CIRCUIT BOARD, SV-84P
C1	1-124-224-00	s	ELECT 47 20% 6.3V
C2	1-124-224-00	s	ELECT 47 20% 6.3V
C3	1-124-236-00	s	ELECT 47 20% 16V
C4	1-124-236-00	s	ELECT 47 20% 16V
C7	1-124-236-00	s	ELECT 47 20% 16V
C10	1-124-236-00	s	ELECT 47 20% 16V
C11	1-162-879-11	s	CERAMIC 100pF 5% 50V
C12	1-130-736-11	s	FILM 0.01 5% 50V
C29	1-124-224-00	s	ELECT 47 20% 6.3V
C30	1-124-224-00	s	ELECT 47 20% 6.3V
C31	1-124-236-00	s	ELECT 47 20% 16V
C32	1-124-236-00	s	ELECT 47 20% 16V
C100	1-124-234-00	s	ELECT 22 20% 16V
C105	1-162-887-11	s	CERAMIC 470pF 5% 50V
C106	1-162-887-11	s	CERAMIC 470pF 5% 50V
C107	1-162-887-11	s	CERAMIC 470pF 5% 50V
C111	1-162-879-11	s	CERAMIC 100pF 5% 50V
C112	1-162-879-11	s	CERAMIC 100pF 5% 50V
C116	1-124-254-00	s	ELECT 0.68 20% 50V
C117	1-124-254-00	s	ELECT 0.68 20% 50V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description			
C118	1-124-261-00	s	ELECT	10	20%	50V
C119	1-124-261-00	s	ELECT	10	20%	50V
C120	1-162-879-11	s	CERAMIC	100pF	5%	50V
C121	1-130-736-11	s	FILM	0.01	5%	50V
C123	1-136-287-11	s	FILM	4700pF	5%	50V
C127	1-130-736-11	s	FILM	0.01	5%	50V
C130	1-124-462-00	s	ELECT	10	20%	16V
C131	1-124-236-00	s	ELECT	47	20%	16V
C202	1-123-611-00	s	ELECT	1	20%	50V
C203	1-124-261-00	s	ELECT	10	20%	50V
C207	1-123-611-00	s	ELECT	1	20%	50V
C208	1-124-261-00	s	ELECT	10	20%	50V
C212	1-123-611-00	s	ELECT	1	20%	50V
C213	1-124-261-00	s	ELECT	10	20%	50V
C216	1-123-611-00	s	ELECT	1	20%	50V
C217	1-123-611-00	s	ELECT	1	20%	50V
C219	1-162-879-11	s	CERAMIC	100pF	5%	50V
C221	1-162-879-11	s	CERAMIC	100pF	5%	50V
5) CN208	1-506-748-31	s	DIN 96P			
6) CN208	1-506-748-11	s	DIN 96P			
D1	8-719-911-19	s	1SS119			
D2	8-719-911-19	s	1SS119			
D4	8-719-911-19	s	1SS119			
D5	8-719-911-19	s	1SS119			
D100	8-719-911-19	s	1SS119			
D101	8-719-911-19	s	1SS119			
D102	8-719-911-19	s	1SS119			
D103	8-719-911-19	s	1SS119			
D104	8-719-911-19	s	1SS119			
D105	8-719-911-19	s	1SS119			
D201	8-719-911-19	s	1SS119			
D202	8-719-911-19	s	1SS119			
D203	8-719-911-19	s	1SS119			
D204	8-719-911-19	s	1SS119			
IC1	8-759-700-07	s	NJM2903M (JRC)			
IC2	8-759-908-92	s	TL084CNS (TI)			
IC3	8-759-908-92	s	TL084CNS (TI)			
IC4	8-759-700-07	s	NJM2903M (JRC)			
IC5	8-759-200-90	s	TC4538BF (TOSHIBA)			
IC6	8-759-208-11	s	TC4053BFHB (TOSHIBA)			
IC7	8-759-910-43	s	CX23028 (SONY)			
IC8	8-759-200-68	s	TC4011BF (TOSHIBA)			
25) IC100	8-759-700-58	s	NJM4558D-FA (JRC)			
26) IC100	8-759-745-50	s	NJM4558D-D (JRC)			
IC101	8-743-914-00	s	BX3914 (SONY)			
IC102	8-759-208-11	s	TC4053BFHB (TOSHIBA)			
IC103	8-759-208-11	s	TC4053BFHB (TOSHIBA)			
IC104	8-759-208-11	s	TC4053BFHB (TOSHIBA)			
IC105	8-759-200-90	s	TC4538BF (TOSHIBA)			
IC106	8-759-200-67	s	TC4001BF (TOSHIBA)			
IC107	8-759-200-83	s	TC4071BF (TOSHIBA)			
IC108	8-759-200-90	s	TC4538BF (TOSHIBA)			
IC109	8-759-907-81	s	SN74LS221NS (TI)			
IC110	8-759-908-92	s	TL084CNS (TI)			

Ref.No.	Parts No.	SP	Description
IC111	8-759-200-90	s	TC4538BF (TOSHIBA)
IC112	8-759-201-53	s	TC40H000F (TOSHIBA)
IC113	8-759-201-53	s	TC40H000F (TOSHIBA)
IC114	8-759-926-37	s	SN74HC193NS (TI)
IC115	8-759-926-37	s	SN74HC193NS (TI)
IC116	8-759-931-55	s	SN74LS683NS (TI)
IC117	8-759-938-68	s	CXD1095Q (SONY)
IC118	8-759-205-39	s	TC74HC4049F (TOSHIBA)
IC119	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC120	8-759-205-05	s	TC74HC32F (TOSHIBA)
IC201	8-759-700-07	s	NJM2903M (JRC)
IC202	8-759-700-07	s	NJM2903M (JRC)
IC203	8-759-208-11	s	TC4053BFHB (TOSHIBA)
L1	1-410-476-11	s	MICRO 33
L2	1-410-476-11	s	MICRO 33
L3	1-410-476-11	s	MICRO 33
L4	1-410-476-11	s	MICRO 33
Q1	8-729-201-05	s	2SC2878-B
Q2	8-729-201-05	s	2SC2878-B
Q3	8-729-201-05	s	2SC2878-B
Q4	8-729-900-89	s	DTC144ES
Q5	8-729-900-89	s	DTC144ES
Q100	8-729-900-89	s	DTC144ES
Q101	8-729-103-43	s	2SB734
Q102	8-729-611-53	s	2SA1115-F
Q103	8-729-900-89	s	DTC144ES
Q104	8-729-201-05	s	2SC2878-B
Q105	8-729-201-05	s	2SC2878-B
Q106	8-729-900-89	s	DTC144ES
Q107	8-729-900-89	s	DTC144ES
Q108	8-729-900-89	s	DTC144ES
Q109	8-729-201-05	s	2SC2878-B
Q110	8-729-900-89	s	DTC144ES
Q111	8-729-201-05	s	2SC2878-B
Q113	8-729-900-89	s	DTC144ES
R6	1-247-903-00	s	CARBON 1.0M 5% 1/4W
R14	1-247-903-00	s	CARBON 1.0M 5% 1/4W
R28	1-247-887-00	s	CARBON 220k 5% 1/4W
R47	1-247-883-00	s	CARBON 150k 5% 1/4W
R53	1-247-883-00	s	CARBON 150k 5% 1/4W
R108	1-247-887-00	s	CARBON 220k 5% 1/4W
R115	1-247-887-00	s	CARBON 220k 5% 1/4W
R118	1-247-887-00	s	CARBON 220k 5% 1/4W
R123	1-247-887-00	s	CARBON 220k 5% 1/4W
R124	1-247-887-00	s	CARBON 220k 5% 1/4W
R134	1-247-887-00	s	CARBON 220k 5% 1/4W
R136	1-247-881-00	s	CARBON 120k 5% 1/4W
R141	1-247-887-00	s	CARBON 220k 5% 1/4W
R145	1-247-881-00	s	CARBON 120k 5% 1/4W
R160	1-247-891-00	s	CARBON 330k 5% 1/4W
R206	1-247-887-00	s	CARBON 220k 5% 1/4W
R214	1-247-887-00	s	CARBON 220k 5% 1/4W
R222	1-247-887-00	s	CARBON 220k 5% 1/4W
R228	1-247-887-00	s	CARBON 220k 5% 1/4W
R250	1-247-887-00	s	CARBON 220k 5% 1/4W
R258	1-247-887-00	s	CARBON 220k 5% 1/4W
R259	1-247-887-00	s	CARBON 220k 5% 1/4W
R260	1-247-887-00	s	CARBON 220k 5% 1/4W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
RV1	1-237-517-21	s	VAR, CERMET 5k
RV2	1-237-518-21	s	VAR, CERMET 10k
RV3	1-237-518-21	s	VAR, CERMET 10k
RV4	1-237-522-21	s	VAR, CERMET 200k
RV100	1-237-522-21	s	VAR, CERMET 200k
RV101	1-237-520-21	s	VAR, CERMET 50k
RV102	1-237-522-21	s	VAR, CERMET 100k
RV202	1-237-503-21	s	VAR, CERMET 10k

SW-144A BOARD

	1-622-573-13	o	PRINTED CIRCUIT BOARD, SW-144
C9	1-124-236-00	s	ELECT 47 20% 16V
C10	1-124-236-00	s	ELECT 47 20% 16V
D1	8-719-800-86	s	TLG255
D2	8-719-800-86	s	TLG255
D3	8-719-800-89	s	TLY255
D4	8-719-800-89	s	TLY255
D5	8-719-800-86	s	TLG255
D7	8-719-800-86	s	TLG255
D10	8-719-800-86	s	TLG255
D11	8-719-911-19	s	1SS119
D12	8-719-800-86	s	TLG255
Q1	8-729-900-63	s	DTA124ES
Q2	8-729-900-63	s	DTA124ES
Q3	8-729-900-63	s	DTA124ES
R3	1-247-706-11	s	CARBON 330 5% 1/4W
R4	1-247-706-11	s	CARBON 330 5% 1/4W
R6	1-247-706-11	s	CARBON 330 5% 1/4W
R17	1-247-710-11	s	CARBON 560 5% 1/4W
S1	1-516-995-00	s	LEVER SLIDE
S2	3-717-672-01	o	STOPPER, KY
S3	1-516-961-00	s	LEVER SLIDE
S4	1-516-995-00	s	LEVER SLIDE

5) **SW-261 BOARD**

All the component parts on the SW-261 Board are supplied together when you order the TBC-7P board.

	1-624-101-11	o	PRINTED CIRCUIT BOARD, SW-261
R1	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
RV1	1-228-459-11	s	VAR, CERMET 10k

Ref.No.	Parts No.	SP	Description
SY-61A BOARD			
IC6	8-759-736-29	s	C256A-BVW60P V2.00 SY1
IC39	8-759-736-30	s	C512-BVW60P V2.00 SY2
12)	A-6717-476-A	o	MOUNTED CIRCUIT BOARD, SY-61A
13)	A-6717-476-B	o	MOUNTED CIRCUIT BOARD, SY-61A
C1	1-124-236-00	s	ELECT 47 20% 10V
C3	1-126-103-11	s	ELECT 470 20% 16V
C5	1-126-103-11	s	ELECT 470 20% 16V
C101	1-124-462-00	s	ELECT 10 20% 16V
C107	1-162-888-11	s	CERAMIC 560pF 5% 50V
C108	1-124-234-00	s	ELECT 22 20% 16V
C111	1-162-887-11	s	CERAMIC 470pF 5% 50V
C201	1-124-462-00	s	ELECT 10 20% 16V
C209	1-107-169-00	s	MICA 100pF 5% 500V
C210	1-107-169-00	s	MICA 100pF 5% 500V
C212	1-123-611-00	s	ELECT 1 20% 50V
C213	1-123-611-00	s	ELECT 1 20% 50V
C301	1-131-347-00	s	TANTAL 1 10% 35V
C302	1-102-114-00	s	CERAMIC 470pF 10% 50V
C305	1-124-462-00	s	ELECT 10 20% 16V
C309	1-102-106-00	s	CERAMIC 100pF 10% 50V
5) CN301	1-506-748-31	s	DIN 96P
6) CN301	1-506-748-11	s	DIN 96P
5) CN302	1-506-748-31	s	DIN 96P
6) CN302	1-506-748-11	s	DIN 96P
CV101	1-141-297-11	s	TRIMMER, CERAMIC 90pF
CV102	1-141-245-00	s	TRIMMER, CERAMIC 30pF
D101	8-719-800-60	s	TLR214
D102	8-719-911-19	s	1SS119
D103	8-719-911-19	s	1SS119
D104	8-719-911-19	s	1SS119
D201	8-719-911-19	s	1SS119
D202	8-719-911-19	s	1SS119
D203	8-719-911-19	s	1SS119
D204	8-719-911-19	s	1SS119
D205	8-719-911-19	s	1SS119
D206	8-719-911-19	s	1SS119
D301	8-719-911-19	s	1SS119
D302	8-719-911-19	s	1SS119
D303	8-719-911-19	s	1SS119
IC1	8-759-902-44	s	SN74LS244N (TI)
IC2	8-759-902-45	s	SN74LS245N (TI)
IC3	8-759-902-44	s	SN74LS244N (TI)
IC4	8-759-942-12	s	MBM2212-25P (FUJITSU)
1) IC5	8-752-320-24	s	CXK5816P-12L (SONY)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
2) IC5	8-752-321-00	s	CXK5816PN-12L (SONY)
IC7	8-759-208-86	s	TMPZ84C011AF (TOSHIBA)
IC8	8-759-202-13	s	TC74HCU04P (TOSHIBA)
IC9	8-759-600-61	s	M54529AP (MITSUBISHI)
IC10	8-759-202-16	s	TC74HC11P (TOSHIBA)
IC11	8-759-202-26	s	TC74HC138P (TOSHIBA)
IC12	8-759-202-26	s	TC74HC138P (TOSHIBA)
IC13	8-759-202-17	s	TC74HC14P (TOSHIBA)
IC14	8-759-240-50	s	TC4050BP (TOSHIBA)
12) IC15	8-759-240-53	s	TC4053BP (TOSHIBA)
13) IC15	8-759-208-10	s	TC4053BFHB (TOSHIBA)
IC16	8-759-203-52	s	TC74HC595P (TOSHIBA)
IC17	8-759-004-84	s	MC74HC597N (MOTOROLA)
IC18	8-759-278-05	s	NJM78L05A (JRC)
IC19	8-759-908-23	s	MB88303 (FUJITSU)
IC20	8-759-926-30	s	AM26LS30PC (AMD)
IC21	8-759-202-27	s	TC74HC157P (TOSHIBA)
IC22	8-759-202-27	s	TC74HC157P (TOSHIBA)
1) IC23	8-752-320-24	s	CXK5816P-12L (SONY)
2) IC23	8-752-321-00	s	CXK5816PN-12L (SONY)
IC24	8-759-202-13	s	TC74HCU04P (TOSHIBA)
IC25	8-759-729-03	s	NJM2903D (JRC)
IC26	8-759-008-57	s	MC34051P (MOTOROLA)
IC27	8-759-208-86	s	TMPZ84C011AF (TOSHIBA)
IC28	8-759-202-56	s	TC74HC245P (TOSHIBA)
IC29	8-759-202-56	s	TC74HC245P (TOSHIBA)
IC30	8-759-916-82	s	LH0082AD (SHARP)
IC31	8-759-600-61	s	M54529AP (MITSUBISHI)
IC32	8-759-600-61	s	M54529AP (MITSUBISHI)
IC33	8-759-207-73	s	TC4030BPHB (TOSHIBA)
IC34	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC35	8-759-906-97	s	SN74LS697N (TI)
IC36	8-759-906-97	s	SN74LS697N (TI)
IC37	8-759-600-61	s	M54529AP (MITSUBISHI)
IC38	8-759-938-68	s	CXD1095Q (SONY)
IC40	8-752-331-08	s	CXK5864BP-12L (SONY)
IC41	8-759-916-84	s	LH0084A (SHARP)
IC42	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC43	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC44	8-759-202-11	s	TC74HC00P (TOSHIBA)
IC45	8-759-603-32	s	M51958BL (MITSUBISHI)
IC46	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC47	8-759-045-38	s	MC14538BCP (MOTOROLA)
IC48	8-759-240-69	s	TC4069UBP (TOSHIBA)
IC49	8-759-001-14	s	MC74HC58N (MOTOROLA)
IC50	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC51	8-759-202-13	s	TC74HCU04P (TOSHIBA)
IC52	8-759-202-89	s	TC74HC139P (TOSHIBA)
IC53	8-759-202-12	s	TC74HC02P (TOSHIBA)
L1	1-459-155-00	s	45 (WITH CORE)
16) R247	1-217-666-31	s	SHORT 0.01 1/6W
R307	1-247-887-00	s	CARBON 220k 5% 1/4W
R315	1-247-887-00	s	CARBON 220k 5% 1/4W

Ref.No.	Parts No.	SP	Description
S101	1-570-707-11	s	SLIDE
S102	1-553-812-00	s	PUSH
S103	1-553-812-00	s	PUSH
S105	1-553-812-00	s	PUSH
S106	1-552-509-00	s	DIP
S202	1-570-707-11	s	SLIDE
S203	1-570-623-11	s	DIP
S204	1-570-623-11	s	DIP
S206	1-553-812-00	s	PUSH
S302	1-552-509-00	s	DIP
X1	1-567-132-00	s	VIBRATOR 8.00MHz
X2	1-567-870-11	s	VIBRATOR 614.00kHz

SY-64AP BOARD

	A-6717-487-A	o	MOUNTED CIRCUIT BOARD, SY-64AP			
C1	1-126-103-11	s	ELECT	470	20%	16V
C3	1-124-135-00	s	ELECT	470	20%	6.3V
C7	1-124-462-00	s	ELECT	10	20%	16V
C9	1-124-462-00	s	ELECT	10	20%	16V
C11	1-124-462-00	s	ELECT	10	20%	16V
C12	1-124-242-00	s	ELECT	33	20%	25V
C13	1-124-242-00	s	ELECT	33	20%	25V
C15	1-124-462-00	s	ELECT	10	20%	16V
C16	1-123-611-00	s	ELECT	1	20%	50V
C32	1-124-462-00	s	ELECT	10	20%	16V
C61	1-124-236-00	s	ELECT	47	20%	16V
C63	1-124-236-00	s	ELECT	47	20%	16V
C65	1-161-463-00	s	CERAMIC	220pF	5%	50V
C66	1-161-463-00	s	CERAMIC	220pF	5%	50V
C67	1-124-462-00	s	ELECT	10	20%	16V
C68	1-124-236-00	s	ELECT	47	20%	16V
C71	1-124-465-00	s	ELECT	0.47	20%	50V
C72	1-162-889-11	s	CERAMIC	680pF	5%	50V
C74	1-161-463-00	s	CERAMIC	220pF	5%	50V
C75	1-102-106-00	s	CERAMIC	100pF	10%	50V
C302	1-124-462-00	s	ELECT	10	20%	16V
C305	1-124-462-00	s	ELECT	10	20%	16V
C309	1-162-880-11	s	CERAMIC	120pF	5%	50V
C312	1-124-462-00	s	ELECT	10	20%	16V
C313	1-162-880-11	s	CERAMIC	120pF	5%	50V
C314	1-124-462-00	s	ELECT	10	20%	16V
C315	1-124-236-00	s	ELECT	47	20%	16V
C316	1-162-880-11	s	CERAMIC	120pF	5%	50V
9) C317	1-124-247-00	s	ELECT	10	20%	25V
C318	1-124-236-00	s	ELECT	47	20%	16V
C319	1-124-236-00	s	ELECT	47	20%	16V
C352	1-102-106-00	s	CERAMIC	100pF	10%	50V
C401	1-129-794-00	s	FILM	0.0033	5%	100V
C404	1-162-887-11	s	CERAMIC	470pF	5%	50V
C405	1-124-224-00	s	ELECT	47	20%	6.3V
C406	1-130-726-00	s	FILM	0.0015	5%	100V
C409	1-162-885-11	s	CERAMIC	330pF	5%	50V
C410	1-124-224-00	s	ELECT	47	20%	6.3V
C412	1-123-611-00	s	ELECT	1	20%	50V
C413	1-124-257-00	s	ELECT	2.2	20%	50V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Y-64AP

Ref.No.	Parts No.	SP	Description
C414	1-124-236-00	s	ELECT 47 20% 16V
5) CN303	1-506-748-31	s	DIN 96P
6) CN303	1-506-748-11	s	DIN 96P
5) CN304	1-506-748-31	s	DIN 96P
6) CN304	1-506-748-11	s	DIN 96P
CN305	1-566-311-11	s	DIN 10P
D2	8-719-200-02	s	10E2
D3	8-719-200-02	s	10E2
D4	8-719-200-02	s	10E2
D5	8-719-200-02	s	10E2
D6	8-719-200-02	s	10E2
D17	8-719-200-02	s	10E2
D18	8-719-200-02	s	10E2
D19	8-719-911-19	s	1SS119
D20	8-719-911-19	s	1SS119
9) D301	8-719-911-19	s	1SS119
D302	8-719-101-97	s	1SS97-1
D303	8-719-101-97	s	1SS97-1
D304	8-719-911-19	s	1SS119
D305	8-719-911-19	s	1SS119
D306	8-719-911-19	s	1SS119
D307	8-719-911-19	s	1SS119
IC1	8-743-430-00	s	BX343 (SONY)
IC2	8-759-800-72	s	LA7205 (SANYO)
IC3	8-759-800-72	s	LA7205 (SANYO)
IC4	8-759-114-14	s	uPD78312CW-608 (NEC)
IC5	8-759-007-40	s	TL082CP (TI)
IC6	8-759-208-12	s	TC4016BPHB (TOSHIBA)
IC7	8-759-007-40	s	TL082CP (TI)
IC9	8-759-942-18	s	TLC548CP (TI)
IC10	8-759-203-35	s	TC74HC373P (TOSHIBA)
IC11	8-752-321-00	s	CXK5816PN-12L (SONY)
IC15	8-759-990-84	s	TL084CN (TI)
IC16	8-759-990-84	s	TL084CN (TI)
IC17	8-759-007-40	s	TL082CP (TI)
IC18	8-759-400-06	s	AN608P (MATSUSHITA)
IC19	8-759-912-64	s	PA0009 (PIONEER)
IC20	8-759-901-23	s	SN74LS123N (TI)
IC21	8-759-202-74	s	TC74HC04P (TOSHIBA)
IC25	8-759-901-23	s	SN74LS123N (TI)
IC26	8-759-240-50	s	TC4050BP (TOSHIBA)
IC27	8-759-202-11	s	TC74HC00P (TOSHIBA)
IC30	8-759-205-56	s	TA7267P (TOSHIBA)
IC31	8-759-205-56	s	TA7267P (TOSHIBA)
IC32	8-759-245-38	s	TC4538BP (TOSHIBA)
IC34	8-759-202-21	s	TC74HC32P (TOSHIBA)
IC35	8-759-240-01	s	TC4001BP (TOSHIBA)
IC36	8-759-340-13	s	HD14013BP (TOSHIBA)
IC37	8-759-600-34	s	M54532P (MITSUBISHI)
IC38	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC39	8-759-202-37	s	TC74HC4050P (TOSHIBA)
IC40	8-759-938-68	s	CXD1095Q (SONY)

Ref.No.	Parts No.	SP	Description
IC41	8-759-202-14	s	TC74HC08P (TOSHIBA)
IC42	8-752-321-00	s	CXK5816PN-12L (SONY)
IC43	8-759-202-33	s	TC74HC240P (TOSHIBA)
IC44	8-759-910-76	s	CX7913A (SONY)
IC45	8-759-645-23	s	M54523P (MITSUBISHI)
IC46	8-759-938-68	s	CXD1095Q (SONY)
IC47	8-759-938-68	s	CXD1095Q (SONY)
IC48	8-759-202-74	s	TC74HC04P (TOSHIBA)
IC49	8-752-321-00	s	CXK5816PN-12L (SONY)
IC50	8-759-202-55	s	TC74HC244P (TOSHIBA)
IC51	8-759-909-72	s	CX7912A (SONY)
IC52	8-759-202-37	s	TC74HC4050P (TOSHIBA)
IC53	8-759-340-13	s	HD14013BP (TOSHIBA)
IC54	8-759-203-83	s	TC74HC4538P (TOSHIBA)
L1	1-459-155-00	s	45 (WITH CORE)
L301	1-410-482-31	s	MICRO 100
L302	1-410-482-31	s	MICRO 100
Q1	8-729-600-27	s	2SC634SP
Q2	8-729-117-54	s	2SA1175
Q4	8-729-600-27	s	2SC634SP
Q301	8-729-600-27	s	2SC634SP
Q302	8-729-201-05	s	2SC2878-B
Q303	8-729-201-05	s	2SC2878-B
Q304	8-729-201-05	s	2SC2878-B
Q305	8-729-201-05	s	2SC2878-B
R73	1-247-903-00	s	CARBON 1M 5% 1/4W
R301	1-247-903-00	s	CARBON 1M 5% 1/4W
R305	1-247-903-00	s	CARBON 1M 5% 1/4W
R318	1-247-903-00	s	CARBON 1M 5% 1/4W
RB301	1-231-387-00	s	NETTY
RB302	1-231-387-00	s	NETTY
RV303	1-237-521-21	s	VAR, CERMET 100k
RV304	1-237-521-21	s	VAR, CERMET 100k
RV305	1-237-521-21	s	VAR, CERMET 100k
RV399	1-237-521-21	s	VAR, CERMET 100k
S1	1-571-060-11	s	SLIDE
S301	1-552-509-00	s	DIP
S302	1-552-509-00	s	DIP
X1	1-567-867-11	s	OSCILLATOR 14.500MHz
X301	1-527-828-00	s	OSCILLATOR 12.000MHz

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

20) TBC-7D BOARD

Ref.No.	Parts No.	SP	Description		
	A-6727-094-A	o	MOUNTED CIRCUIT BOARD, TBC-7D		
C100	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C105	1-135-076-21	s	TANTAL 1	10%	35V
C108	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C110	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C111	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C115	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C121	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C124	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C125	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C126	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C128	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C130	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C135	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C205	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C206	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C209	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C211	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C213	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C217	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C219	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C221	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C225	1-162-568-11	s	CERAMIC CHIP 0.33		25V
C226	1-162-638-11	s	CERAMIC CHIP 1		16V
C227	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C228	1-162-568-11	s	CERAMIC CHIP 0.33		25V
C229	1-162-638-11	s	CERAMIC CHIP 1		16V
C231	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C234	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C236	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C242	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C243	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C245	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C246	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C248	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C253	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C254	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C255	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C259	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C263	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C265	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C270	1-162-638-11	s	CERAMIC CHIP 1		16V
C271	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C273	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C276	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C277	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C281	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C284	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C288	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C290	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C291	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C293	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C295	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C302	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V

Ref.No.	Parts No.	SP	Description		
C400	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C402	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C403	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C405	1-135-076-21	s	TANTAL 1	10%	35V
C408	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C412	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C418	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C419	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C421	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C422	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C424	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C504	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C509	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C511	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C521	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C522	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C524	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C526	1-162-638-11	s	CERAMIC CHIP 1		16V
C527	1-162-568-11	s	CERAMIC CHIP 0.33		25V
C529	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C531	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C533	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C535	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C536	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C537	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C540	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C542	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C545	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C548	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C550	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C555	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C558	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C559	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C566	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C569	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C575	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C578	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C581	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C583	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C600	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C611	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C612	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C613	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C615	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C651	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C701	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C704	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C706	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C708	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C750	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C801	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C804	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C805	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C807	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C902	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C905	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C908	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C911	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C914	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C917	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
C920	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C923	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C926	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C929	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C932	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C935	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
CN108	1-506-746-11	s	DIN 48P
CN109	1-506-748-11	s	DIN 96P
D100	8-719-105-82	s	RD5.1M-B2
D200	8-719-106-08	s	RD6.2M-B2
D202	8-719-915-43	s	FC54M
D203	8-719-915-43	s	FC54M
D204	8-719-915-43	s	FC54M
D205	8-719-938-98	s	FC51M
D206	8-719-938-98	s	FC51M
D207	8-719-938-98	s	FC51M
D208	8-719-101-23	s	1SS123
D209	8-719-100-03	s	1S2835
D210	8-719-105-82	s	RD5.1M-B2
D211	8-719-106-53	s	RD10M-B2
D212	8-719-938-98	s	FC51M
D213	8-719-938-98	s	FC51M
D214	8-719-100-03	s	1S2835
D400	8-719-105-82	s	RD5.1M-B2
D503	8-719-915-43	s	FC54M
D504	8-719-915-43	s	FC54M
D505	8-719-915-43	s	FC54M
D506	8-719-101-23	s	1SS123
D507	8-719-106-62	s	RD11M-B2
D508	8-719-105-82	s	RD5.1M-B2
D650	8-719-106-17	s	RD6.8M-B2
D680	8-719-101-23	s	1SS123
D700	8-719-100-03	s	1S2835
D704	8-719-105-82	s	RD5.1M-B2
D705	8-719-105-73	s	RD4.7M-B2
D706	8-719-101-23	s	1SS123
D707	8-719-106-17	s	RD6.8M-B2
DL500	1-415-309-00	s	350ns
FL100	1-236-006-13	s	LOW-PASS 7.0MHz
FL400	1-236-162-11	s	LOW-PASS 4.2MHz
IC101	8-749-901-45	s	SBX4002-01 (NEC)
IC102	8-759-908-15	s	TL431CLP (TI)
IC103	8-759-908-17	s	TL082CPS (TI)
IC105	8-752-032-55	s	CXA1096M (SONY)
IC108	8-759-948-32	s	CXD1310AM (SONY)
IC201	8-759-201-47	s	TA7357AP (TOSHIBA)
IC203	8-759-941-27	s	MB4002PF (FUJITSU)
IC205	8-759-941-27	s	MB4002PF (FUJITSU)
IC206	8-759-907-81	s	SN74LS221NS (TI)
IC207	8-759-908-17	s	TL082CPS (TI)

Ref.No.	Parts No.	SP	Description
IC208	8-759-941-17	s	SN74LS06NS (TI)
IC209	8-759-012-00	s	MC10H116M (MOTOROLA)
IC210	8-759-012-13	s	MC10H125M (MOTOROLA)
IC211	8-759-230-23	s	CXD1045AQ (SONY)
IC212	8-749-901-21	s	BX1461 (SONY)
IC213	8-759-908-17	s	TL082CPS (TI)
IC214	8-759-945-29	s	TL601CPS (TI)
IC215	8-759-907-81	s	SN74LS221NS (TI)
IC216	8-749-901-20	s	BX1460 (SONY)
IC217	8-759-105-49	s	uPC319G2 (NEC)
IC218	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC219	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC220	8-759-908-17	s	TL082CPS (TI)
IC221	8-759-945-29	s	TL601CPS (TI)
IC222	8-759-100-97	s	uPC339G2 (NEC)
IC223	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC224	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC225	8-759-908-17	s	TL082CPS (TI)
IC226	8-759-945-29	s	TL601CPS (TI)
IC228	8-759-908-17	s	TL082CPS (TI)
IC231	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC232	8-759-945-29	s	TL601CPS (TI)
IC234	8-759-205-17	s	TC74HC174F (TOSHIBA)
IC235	8-759-205-12	s	TC74HC157F (TOSHIBA)
IC236	8-759-205-12	s	TC74HC157F (TOSHIBA)
IC237	8-759-908-17	s	TL082CPS (TI)
IC238	8-759-907-81	s	SN74LS221NS (TI)
IC239	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC240	8-759-945-29	s	TL601CPS (TI)
IC241	8-759-100-93	s	uPC393G2 (NEC)
IC401	8-749-901-45	s	SBX4002-01 (NEC)
IC403	8-752-032-55	s	CXA1096M (SONY)
IC404	8-759-948-32	s	CXD1310AM (SONY)
IC501	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC502	8-759-201-47	s	TA7357AP (TOSHIBA)
IC504	8-759-908-17	s	TL082CPS (TI)
IC505	8-759-941-17	s	SN74LS06NS (TI)
IC506	8-759-012-13	s	MC10H125M (MOTOROLA)
IC507	8-759-230-23	s	CXD1045AQ (SONY)
IC508	8-749-901-21	s	BX1461 (SONY)
IC509	8-759-908-17	s	TL082CPS (TI)
IC510	8-759-945-29	s	TL601CPS (TI)
IC511	8-749-901-20	s	BX1460 (SONY)
IC512	8-759-907-81	s	SN74LS221NS (TI)
IC513	8-759-941-27	s	MB4002PF (FUJITSU)
IC514	8-759-945-29	s	TL601CPS (TI)
IC516	8-759-908-17	s	TL082CPS (TI)
IC517	8-759-908-17	s	TL082CPS (TI)
IC519	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC520	8-759-945-29	s	TL601CPS (TI)
IC522	8-759-105-49	s	uPC319G2 (NEC)
IC523	8-759-908-17	s	TL082CPS (TI)
IC610	8-759-908-15	s	TL431CLP (TI)
IC611	8-759-908-17	s	TL082CPS (TI)
IC650	8-759-941-27	s	MB4002PF (FUJITSU)
IC700	8-759-945-29	s	TL601CPS (TI)
IC701	8-752-015-81	s	CX20158 (SONY)
IC702	8-752-332-67	s	CXD1217M (SONY)
IC720	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC801	8-752-015-81	s	CX20158 (SONY)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
L102	1-410-470-11	s	MICRO 10
L103	1-410-470-11	s	MICRO 10
L104	1-410-470-11	s	MICRO 10
L205	1-408-880-00	s	MICRO 0.68
L214	1-410-492-11	s	MICRO 680
L219	1-410-461-41	s	MICRO 1.8
L402	1-410-470-11	s	MICRO 10
L403	1-410-470-11	s	MICRO 10
L406	1-410-470-11	s	MICRO 10
L508	1-408-880-00	s	MICRO 0.68
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
L903	1-421-329-00	s	CHOKE
L904	1-421-329-00	s	CHOKE
L905	1-421-329-00	s	CHOKE
L906	1-421-329-00	s	CHOKE
L907	1-421-329-00	s	CHOKE
L908	1-421-329-00	s	CHOKE
L909	1-421-329-00	s	CHOKE
L910	1-421-329-00	s	CHOKE
L911	1-421-329-00	s	CHOKE
LV200	1-407-563-00	s	VAR 1
LV201	1-407-564-00	s	VAR 1.5
LV500	1-407-563-00	s	VAR 1
Q100	8-729-100-66	s	2SC1623
Q101	8-729-106-68	s	2SD1615A-GP
Q102	8-729-106-60	s	2SB1115A
Q103	8-729-102-07	s	2SC2223-F13
Q104	8-729-102-07	s	2SC2223-F13
Q105	8-729-109-43	s	2SK94-X3
Q106	8-729-102-07	s	2SC2223-F13
Q201	8-729-100-66	s	2SC1623
Q203	8-729-100-66	s	2SC1623
Q204	8-729-100-66	s	2SC1623
Q205	8-729-100-66	s	2SC1623
Q206	8-729-100-66	s	2SC1623
Q207	8-729-100-66	s	2SC1623
Q208	8-729-109-43	s	2SK94-X3
Q211	8-729-102-07	s	2SC2223-F13
Q212	8-729-102-07	s	2SC2223-F13
Q213	8-729-109-43	s	2SK94-X3
Q214	8-729-102-07	s	2SC2223-F13
Q215	8-729-100-76	s	2SA812
Q220	8-729-109-43	s	2SK94-X3
Q221	8-729-109-43	s	2SK94-X3
Q222	8-729-202-38	s	2SC3326N
Q223	8-729-800-44	s	2SK152-4
Q224	8-729-900-53	s	DTC114EK
Q225	8-729-900-53	s	DTC114EK
Q226	8-729-900-53	s	DTC114EK
Q227	8-729-900-53	s	DTC114EK
Q228	8-729-900-53	s	DTC114EK
Q229	8-729-202-38	s	2SC3326N
Q230	8-729-202-38	s	2SC3326N

Ref.No.	Parts No.	SP	Description
Q400	8-729-100-66	s	2SC1623
Q401	8-729-102-07	s	2SC2223-F13
Q402	8-729-102-07	s	2SC2223-F13
Q403	8-729-109-43	s	2SK94-X3
Q404	8-729-102-07	s	2SC2223-F13
Q500	8-729-100-66	s	2SC1623
Q501	8-729-100-66	s	2SC1623
Q503	8-729-100-66	s	2SC1623
Q504	8-729-100-66	s	2SC1623
Q505	8-729-100-66	s	2SC1623
Q512	8-729-102-07	s	2SC2223-F13
Q513	8-729-109-43	s	2SK94-X3
Q514	8-729-102-07	s	2SC2223-F13
Q515	8-729-102-07	s	2SC2223-F13
Q516	8-729-100-76	s	2SA812
Q610	8-729-106-68	s	2SD1615A-GP
Q611	8-729-106-60	s	2SB1115A
Q680	8-729-109-43	s	2SK94-X3
Q681	8-729-100-66	s	2SC1623
Q800	8-729-109-43	s	2SK94-X3
Q801	8-729-109-43	s	2SK94-X3
Q802	8-729-100-66	s	2SC1623
Q803	8-729-109-43	s	2SK94-X3
R101	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R105	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R106	1-216-639-11	s	METAL CHIP 330 0.50% 1/10W
R107	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R111	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R114	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R115	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R135	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R139	1-216-655-11	s	METAL CHIP 1.5k 0.50% 1/10W
R140	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
R142	1-216-018-11	s	CHIP 51 5% 1/10W
R149	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R205	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R213	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
R218	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R219	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R220	1-216-674-11	s	METAL CHIP 9.1k 0.50% 1/10W
R222	1-216-660-11	s	METAL CHIP 2.4k 0.50% 1/10W
R249	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R250	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R251	1-216-682-11	s	METAL CHIP 20k 0.50% 1/10W
R252	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R254	1-216-695-11	s	METAL CHIP 68k 0.50% 1/10W
R258	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R259	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R264	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R267	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R270	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R271	1-216-680-11	s	METAL CHIP 16k 0.50% 1/10W
R272	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R276	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
R288	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R293	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R294	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R296	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description		
R302	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R303	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R304	1-216-018-00	s	CHIP 51	5%	1/10W
R312	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R313	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R314	1-216-686-11	s	METAL CHIP 30k	0.50%	1/10W
R316	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R317	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R330	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R338	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R340	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R341	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R348	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R353	1-216-662-11	s	METAL CHIP 3k	0.50%	1/10W
R354	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R355	1-216-693-11	s	METAL CHIP 56k	0.50%	1/10W
R356	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R357	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R358	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R359	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R360	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R361	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R367	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R368	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R371	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
R372	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R375	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R376	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R379	1-216-685-11	s	METAL CHIP 27k	0.50%	1/10W
R380	1-216-666-11	s	METAL CHIP 4.3k	0.50%	1/10W
R401	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R405	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R406	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R407	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R411	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R412	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
R426	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R431	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R432	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R433	1-216-018-00	s	CHIP 51	5%	1/10W
R438	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R507	1-216-634-11	s	METAL CHIP 200	0.50%	1/10W
R509	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R510	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R511	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R512	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R513	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
R517	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R518	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R522	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R523	1-216-699-11	s	METAL CHIP 100k	0.50%	1/10W
R527	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R528	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R535	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W
R536	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R541	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R543	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R544	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R545	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R547	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W

Ref.No.	Parts No.	SP	Description		
R548	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R549	1-216-698-11	s	METAL CHIP 91k	0.50%	1/10W
R550	1-216-680-11	s	METAL CHIP 16k	0.50%	1/10W
R551	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R552	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R553	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R565	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R566	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R567	1-216-686-11	s	METAL CHIP 30k	0.50%	1/10W
R570	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R571	1-216-687-11	s	METAL CHIP 33k	0.50%	1/10W
R581	1-216-634-11	s	METAL CHIP 200	0.50%	1/10W
R585	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R586	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R587	1-216-018-00	s	CHIP 51	5%	1/10W
R594	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R595	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R597	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R599	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R601	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R605	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R611	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R612	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R704	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R708	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R709	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
R710	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R717	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R718	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R719	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R720	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R807	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R816	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R817	1-216-668-11	s	METAL CHIP 5.1k	0.50%	1/10W

RV100	1-237-515-21	s	VAR, CERMET	1k
RV101	1-237-514-21	s	VAR, CERMET	500
RV102	1-237-515-21	s	VAR, CERMET	1k
RV103	1-237-515-21	s	VAR, CERMET	1k
RV200	1-237-517-21	s	VAR, CERMET	5k
RV201	1-237-516-21	s	VAR, CERMET	2k
RV202	1-230-847-11	s	VAR, METAL FILM	500k
RV203	1-237-518-21	s	VAR, CERMET	10k
RV400	1-237-514-21	s	VAR, CERMET	500
RV401	1-237-516-21	s	VAR, CERMET	2k
RV402	1-237-515-21	s	VAR, CERMET	1k
RV500	1-237-516-21	s	VAR, CERMET	2k
RV501	1-237-516-21	s	VAR, CERMET	2k
RV502	1-237-517-21	s	VAR, CERMET	5k
RV503	1-237-518-21	s	VAR, CERMET	10k
RV610	1-237-515-21	s	VAR, CERMET	1k

S101	1-553-977-00	s	SLIDE
S200	1-553-977-00	s	SLIDE

TH201	1-800-198-XX	s	S-1K
TH202	1-800-202-XX	s	S-10K
TH501	1-800-198-XX	s	S-1K
TH502	1-800-202-XX	s	S-10K

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Ref.No.	Parts No.	SP	Description		
19)	**TBC-7P BOARD**				
5)	This board includes the SW-261 board.				
	A-6711-888-B	o	MOUNTED CIRCUIT BOARD, TBC-7P		
C100	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C102	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C103	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C105	1-135-076-21	s	TANTAL CHIP 1	10%	35V
C108	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C110	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C111	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C115	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C121	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C124	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C125	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C126	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C128	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C130	1-163-033-00	s	CERAMIC CHIP 0.022		50V
6) C135	1-163-037-00	s	CERAMIC CHIP 0.022	10%	25V
C205	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C206	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C209	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C211	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C213	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C217	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C219	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C221	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C225	1-162-568-11	s	CERAMIC CHIP 0.33		25V
C226	1-162-638-11	s	CERAMIC CHIP 1		16V
C227	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C228	1-162-568-11	s	CERAMIC CHIP 0.33		25V
C229	1-162-638-11	s	CERAMIC CHIP 1		16V
C231	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C234	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C236	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C242	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C243	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C245	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C246	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C248	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C253	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C254	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C255	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C259	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C263	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C265	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C270	1-162-638-11	s	CERAMIC CHIP 1		16V
C271	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C273	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C276	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C277	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C281	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C284	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C286	1-124-462-00	s	ELECT 10	20%	16V
C288	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C290	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C291	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C293	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C295	1-163-033-00	s	CERAMIC CHIP 0.022		50V

Ref.No.	Parts No.	SP	Description		
C400	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C402	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C403	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C405	1-135-076-21	s	TANTAL CHIP 1	10%	35V
C408	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C412	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C418	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C419	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C421	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C422	1-163-033-00	s	CERAMIC CHIP 0.022		50V
6) C424	1-163-037-00	s	CERAMIC CHIP 0.022	10%	25V
C504	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C505	1-124-462-00	s	ELECT 10	20%	16V
C509	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C511	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C521	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C522	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C524	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C526	1-162-638-11	s	CERAMIC CHIP 1		16V
C527	1-162-568-11	s	CERAMIC CHIP 0.33		25V
C529	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C531	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C533	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C535	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C536	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C537	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C540	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C542	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C545	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C548	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C550	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C555	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C558	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C559	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C566	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C569	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C575	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C578	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C581	1-163-033-00	s	CERAMIC CHIP 0.022		50V
6) C583	1-163-037-00	s	CERAMIC CHIP 0.022	10%	25V
C600	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C611	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C612	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C613	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C615	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C651	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C701	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C704	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C706	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C708	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C750	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C801	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C804	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C807	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C902	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C905	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C908	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C911	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C914	1-163-033-00	s	CERAMIC CHIP 0.022		50V
C917	1-163-033-00	s	CERAMIC CHIP 0.022		50V

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Ref.No.	Parts No.	SP	Description	
C920	1-163-033-00	s	CERAMIC CHIP 0.022	50V
C923	1-163-033-00	s	CERAMIC CHIP 0.022	50V
C926	1-163-033-00	s	CERAMIC CHIP 0.022	50V
C929	1-163-033-00	s	CERAMIC CHIP 0.022	50V
C932	1-163-033-00	s	CERAMIC CHIP 0.022	50V
C935	1-163-033-00	s	CERAMIC CHIP 0.022	50V
CN108	1-506-746-11	s	DIN 48P	
5) CN109	1-506-748-31	s	DIN 96P	
6) CN109	1-506-748-11	s	DIN 96P	
D1	8-719-101-23	s	1SS123	
D100	8-719-105-82	s	RD5.1M-B2	
D200	8-719-106-08	s	RD6.2M	
D202	8-719-915-43	s	FC54M	
D203	8-719-915-43	s	FC54M	
D204	8-719-915-43	s	FC54M	
D205	8-719-938-98	s	FC51M	
D206	8-719-938-98	s	FC51M	
D207	8-719-938-98	s	FC51M	
D208	8-719-101-23	s	1SS123	
D209	8-719-100-03	s	1S2835	
D210	8-719-105-82	s	RD5.1M-B2	
D211	8-719-106-62	s	RD11M-B2	
D212	8-719-938-98	s	FC51M	
D213	8-719-938-98	s	FC51M	
D400	8-719-105-82	s	RD5.1M-B2	
D503	8-719-915-43	s	FC54M	
D504	8-719-915-43	s	FC54M	
D505	8-719-915-43	s	FC54M	
D506	8-719-101-23	s	1SS123	
D507	8-719-106-62	s	RD11M-B2	
D508	8-719-105-82	s	RD5.1M-B2	
D650	8-719-106-17	s	RD6.8M-B2	
D680	8-719-101-23	s	1SS123	
D700	8-719-100-03	s	1S2835	
D704	8-719-105-82	s	RD5.1M-B2	
D705	8-719-105-64	s	RD4.3M-B2	
D706	8-719-101-23	s	1SS123	
D707	8-719-106-17	s	RD6.8M-B2	
DL500	1-415-309-00	s	350ns	
FL100	1-236-006-13	s	LOW-PASS 7.0MHz	
FL400	1-236-162-11	s	LOW-PASS 4.2MHz	
IC101	8-749-901-45	s	SBX4002-01 (NEC)	
IC102	8-759-914-44	s	TL431CLPB (TI)	
IC103	8-759-908-17	s	TL082CPS (TI)	
IC105	8-752-032-55	s	CXA1096M (SONY)	
IC108	8-759-948-32	s	CXD1310AM (SONY)	
IC201	8-759-201-47	s	TA7357AP (TOSHIBA)	
IC203	8-759-941-27	s	MB4002PF (FUJITSU)	
IC205	8-759-941-27	s	MB4002PF (FUJITSU)	
IC206	8-759-907-81	s	SN74LS221NS (TI)	
IC207	8-759-908-17	s	TL082CPS (TI)	

Ref.No.	Parts No.	SP	Description
IC208	8-759-941-17	s	SN74LS06NS (TI)
IC209	8-759-012-00	s	MC10H116M (MOTOROLA)
IC210	8-759-012-13	s	MC10H125M (MOTOROLA)
IC211	8-759-230-23	s	CXD1045AQ (SONY)
IC212	8-749-901-21	s	BX1461 (SONY)
IC213	8-759-908-17	s	TL082CPS (TI)
IC214	8-759-945-29	s	TL601CPS (TI)
IC215	8-759-907-81	s	SN74LS221NS (TI)
IC216	8-749-901-20	s	BX1460 (SONY)
IC217	8-759-105-49	s	uPC319G2 (NEC)
IC218	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC219	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC220	8-759-908-17	s	TL082CPS (TI)
IC221	8-759-945-29	s	TL601CPS (TI)
IC222	8-759-100-97	s	uPC339G2 (NEC)
5) IC223	8-759-205-05	s	TC74HC32F (TOSHIBA)
6) IC223	8-759-205-08	s	TC74HC86F (TOSHIBA)
5) IC224	8-759-204-94	s	TC74HC00F (TOSHIBA)
6) IC224	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC225	8-759-908-17	s	TL082CPS (TI)
IC226	8-759-945-29	s	TL601CPS (TI)
IC228	8-759-908-17	s	TL082CPS (TI)
IC231	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC232	8-759-945-29	s	TL601CPS (TI)
IC234	8-759-205-17	s	TC74HC174F (TOSHIBA)
6) IC235	8-759-205-12	s	TC74HC157F (TOSHIBA)
6) IC236	8-759-205-12	s	TC74HC157F (TOSHIBA)
6) IC237	8-759-908-17	s	TL082CPS (TI)
6) IC239	8-759-205-05	s	TC74HC32F (TOSHIBA)
6) IC240	8-759-945-29	s	TL061CPS (TI)
6) IC241	8-759-100-93	s	uPC393G2 (NEC)
IC401	8-749-901-45	s	SBX4002-01 (NEC)
IC403	8-752-032-55	s	CXA1096M (SONY)
IC404	8-759-948-32	s	CXD1310AM (SONY)
IC501	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC502	8-759-201-47	s	TA7357AP (TOSHIBA)
IC504	8-759-908-17	s	TL082CPS (TI)
IC505	8-759-941-17	s	SN74LS06NS (TI)
IC506	8-759-012-13	s	MC10H125M (MOTOROLA)
IC507	8-759-230-23	s	CXD1045AQ (SONY)
IC508	8-749-901-21	s	BX1461 (SONY)
IC509	8-759-908-17	s	TL082CPS (TI)
IC510	8-759-945-29	s	TL601CPS (TI)
IC511	8-749-901-20	s	BX1460 (SONY)
IC512	8-759-907-81	s	SN74LS221NS (TI)
IC513	8-759-941-27	s	MB4002PF (FUJITSU)
IC514	8-759-945-29	s	TL601CPS (TI)
IC516	8-759-908-17	s	TL082CPS (TI)
IC517	8-759-908-17	s	TL082CPS (TI)
IC519	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC520	8-759-945-29	s	TL601CPS (TI)
6) IC521	8-759-205-05	s	TC74HC32F (TOSHIBA)
6) IC522	8-759-105-49	s	uPC319G2 (NEC)
IC605	8-759-941-27	s	MB4002PF (FUJITSU)
IC610	8-759-914-44	s	TL431CLPB (TI)
IC611	8-759-908-17	s	TL082CPS (TI)
IC700	8-759-945-29	s	TL601CPS (TI)
IC701	8-752-015-81	s	CX20158 (SONY)
IC702	8-757-930-11	s	CX7930A (SONY)
IC720	8-759-204-98	s	TC74HC08F (TOSHIBA)

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Ref.No.	Parts No.	SP	Description
IC800	8-759-945-29	s	TL601CPS (TI)
IC801	8-752-015-81	s	CX20158 (SONY)
IC802	8-757-930-11	s	CX7930A (SONY)
IC803	8-759-907-81	s	SN74LS221NS (TI)
L102	1-410-470-11	s	MICRO 10
L103	1-410-470-11	s	MICRO 10
L104	1-410-470-11	s	MICRO 10
L205	1-408-879-21	s	MICRO 0.47
L214	1-410-492-11	s	MICRO 680
L219	1-408-461-21	s	MICRO 1.8
L402	1-410-470-11	s	MICRO 10
L403	1-410-470-11	s	MICRO 10
L406	1-410-470-11	s	MICRO 10
L507	1-410-488-21	s	MICRO 330
L508	1-408-879-21	s	MICRO 0.47
6) L651	1-410-484-00	s	MICRO 150
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
L903	1-421-329-00	s	CHOKE
L904	1-421-329-00	s	CHOKE
L905	1-421-329-00	s	CHOKE
L906	1-421-329-00	s	CHOKE
L907	1-421-329-00	s	CHOKE
L908	1-421-329-00	s	CHOKE
L909	1-421-329-00	s	CHOKE
L910	1-421-329-00	s	CHOKE
L911	1-421-329-00	s	CHOKE
5) LV200	1-410-286-11	s	VAR 1.0
6) LV200	1-407-563-11	s	VAR 1.0
5) LV201	1-410-286-11	s	VAR 1.0
6) LV201	1-407-563-11	s	VAR 1.0
5) LV500	1-410-286-11	s	VAR 1.0
6) LV500	1-407-563-11	s	VAR 1.0
Q100	8-729-100-66	s	2SC1623
Q101	8-729-106-68	s	2SD1615A-GP
Q102	8-729-106-60	s	2SB1115A
Q103	8-729-102-06	s	2SC2223
Q104	8-729-102-06	s	2SC2223
Q105	8-729-109-44	s	2SK94
Q201	8-729-100-66	s	2SC1623
Q203	8-729-100-66	s	2SC1623
Q204	8-729-100-66	s	2SC1623
Q205	8-729-100-66	s	2SC1623
Q206	8-729-100-66	s	2SC1623
Q207	8-729-100-66	s	2SC1623
Q208	8-729-109-44	s	2SK94
5) Q209	8-729-109-44	s	2SK94
5) Q210	8-729-109-44	s	2SK94
Q211	8-729-102-06	s	2SC2223
Q212	8-729-102-06	s	2SC2223
Q213	8-729-109-44	s	2SK94
Q214	8-729-102-06	s	2SC2223
Q215	8-729-100-76	s	2SA812

Ref.No.	Parts No.	SP	Description
Q220	8-729-100-44	s	2SK94
Q221	8-729-100-44	s	2SK94
Q223	8-729-800-44	s	2SK152-4
6) Q224	8-729-202-38	s	2SC3326N
6) Q225	8-729-202-38	s	2SC3326N
6) Q226	8-729-202-38	s	2SC3326N
6) Q227	8-729-202-38	s	2SC3326N
6) Q228	8-729-202-38	s	2SC3326N
6) Q229	8-729-202-38	s	2SC3326N
6) Q230	8-729-202-38	s	2SC3326N
5) Q244	8-729-100-66	s	2SC1623
Q400	8-729-100-66	s	2SC1623
Q401	8-729-102-06	s	2SC2223
Q402	8-729-102-06	s	2SC2223
Q403	8-729-109-44	s	2SK94
Q404	8-729-102-06	s	2SC2223
Q500	8-729-100-66	s	2SC1623
Q501	8-729-100-66	s	2SC1623
Q503	8-729-100-66	s	2SC1623
Q504	8-729-100-66	s	2SC1623
Q505	8-729-100-66	s	2SC1623
Q512	8-729-102-06	s	2SC2223
Q513	8-729-100-44	s	2SK94
Q514	8-729-102-06	s	2SC2223
Q515	8-729-102-06	s	2SC2223
Q516	8-729-100-76	s	2SA812
Q610	8-729-106-68	s	2SD1615A
Q611	8-729-106-68	s	2SD1615A
Q680	8-729-100-44	s	2SK94
Q681	8-729-100-66	s	2SC1623
Q800	8-729-100-44	s	2SK94
Q801	8-729-100-44	s	2SK94
Q802	8-729-100-66	s	2SC1623

R101	1-216-651-11	s	METAL CHIP	1k	0.50%	1/10W
R105	1-216-639-11	s	METAL CHIP	330	0.50%	1/10W
R106	1-216-639-11	s	METAL CHIP	330	0.50%	1/10W
R107	1-216-641-11	s	METAL CHIP	390	0.50%	1/10W
R111	1-216-659-11	s	METAL CHIP	2.2k	0.50%	1/10W
R114	1-216-675-11	s	METAL CHIP	10k	0.50%	1/10W
R115	1-216-675-11	s	METAL CHIP	10k	0.50%	1/10W
R139	1-216-655-11	s	METAL CHIP	1.5k	0.50%	1/10W
R140	1-216-653-11	s	METAL CHIP	1.2k	0.50%	1/10W
R142	1-216-018-00	s	CHIP	51	5%	1/10W
6) R149	1-216-659-11	s	METAL CHIP	2.2k	0.50%	1/10W
R205	1-216-665-11	s	METAL CHIP	3.9k	0.50%	1/10W
R213	1-216-653-11	s	METAL CHIP	1.2k	0.50%	1/10W
R218	1-216-669-11	s	METAL CHIP	5.6k	0.50%	1/10W
R219	1-216-691-11	s	METAL CHIP	47k	0.50%	1/10W
R220	1-216-674-11	s	METAL CHIP	9.1k	0.50%	1/10W
R222	1-216-660-11	s	METAL CHIP	2.4k	0.50%	1/10W
R249	1-216-682-11	s	METAL CHIP	20k	0.50%	1/10W
R250	1-216-669-11	s	METAL CHIP	5.6k	0.50%	1/10W
R251	1-216-682-11	s	METAL CHIP	20k	0.50%	1/10W
R252	1-216-671-11	s	METAL CHIP	6.8k	0.50%	1/10W
10) R254	1-216-695-11	s	METAL CHIP	68k	0.50%	1/10W
R258	1-216-671-11	s	METAL CHIP	6.8k	0.50%	1/10W
R259	1-216-659-11	s	METAL CHIP	2.2k	0.50%	1/10W
R264	1-216-683-11	s	METAL CHIP	22k	0.50%	1/10W

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Ref.No.	Parts No.	SP	Description		
R267	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R270	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R271	1-216-680-11	s	METAL CHIP 16k	0.50%	1/10W
R272	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R276	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R293	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R294	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R296	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R302	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R303	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R304	1-216-018-00	s	CHIP 51	5%	1/10W
5) R312	1-216-642-11	s	METAL CHIP 430	0.50%	1/10W
6) R312	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R313	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R314	1-216-686-11	s	METAL CHIP 30k	0.50%	1/10W
R316	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R317	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R330	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R338	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R340	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R341	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
10) R348	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
6) R353	1-216-662-11	s	METAL CHIP 3k	0.50%	1/10W
6) R356	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
6) R357	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
6) R358	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
6) R359	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
6) R360	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
6) R361	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
6) R367	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
6) R368	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
6) R371	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
6) R372	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
6) R375	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
6) R376	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
6) R379	1-216-685-11	s	METAL CHIP 27k	0.50%	1/10W
6) R380	1-216-666-11	s	METAL CHIP 4.3k	0.50%	1/10W
R401	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R405	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R406	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R407	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
R411	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R412	1-216-669-11	s	METAL CHIP 5.6k	0.50%	1/10W
R426	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R431	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R432	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R433	1-216-018-00	s	CHIP 51	5%	1/10W
6) R438	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R507	1-216-634-11	s	METAL CHIP 200	0.50%	1/10W
R509	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R510	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R511	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R512	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R513	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
R517	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R518	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R522	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R523	1-216-699-11	s	METAL CHIP 100k	0.50%	1/10W
R527	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R528	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W

Ref.No.	Parts No.	SP	Description		
R535	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W
R536	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R541	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R543	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R544	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
R545	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R547	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R548	1-216-665-11	s	METAL CHIP 3.9k	0.50%	1/10W
R549	1-216-698-11	s	METAL CHIP 91k	0.50%	1/10W
R550	1-216-680-11	s	METAL CHIP 16k	0.50%	1/10W
R551	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R552	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R553	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
5) R565	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
6) R565	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R566	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R567	1-216-686-11	s	METAL CHIP 30k	0.50%	1/10W
R581	1-216-634-11	s	METAL CHIP 200	0.50%	1/10W
R585	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R586	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R587	1-216-018-00	s	CHIP 51	5%	1/10W
R594	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R595	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R597	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R599	1-216-681-11	s	METAL CHIP 18k	0.50%	1/10W
R600	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R601	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R605	1-216-691-11	s	METAL CHIP 47k	0.50%	1/10W
R611	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R612	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R704	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R708	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R709	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
R710	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R717	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R718	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R719	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R720	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
5) R742	1-216-678-11	s	METAL CHIP 13k	0.50%	1/10W
R803	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
R807	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
5) R808	1-216-652-11	s	METAL CHIP 1.1k	0.50%	1/10W
5) R809	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R810	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R816	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R817	1-216-668-11	s	METAL CHIP 5.1k	0.50%	1/10W
RV100	1-237-515-21	s	VAR, CERMET 1k		
RV101	1-237-514-21	s	VAR, CERMET 500		
RV102	1-237-515-21	s	VAR, CERMET 1k		
6) RV103	1-237-515-21	s	VAR, CERMET 1k		
RV200	1-237-515-21	s	VAR, CERMET 5k		
RV201	1-237-515-21	s	VAR, CERMET 2k		
RV203	1-237-518-21	s	VAR, CERMET 10k		
RV400	1-237-514-21	s	VAR, CERMET 500		
RV401	1-237-516-21	s	VAR, CERMET 2k		
6) RV402	1-237-515-21	s	VAR, CERMET 1k		

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Ref.No.	Parts No.	SP	Description
RV500	1-237-516-21	s	VAR, CERMET 2k
RV501	1-237-516-21	s	VAR, CERMET 2k
RV502	1-237-517-21	s	VAR, CERMET 5k
6) RV503	1-237-518-21	s	VAR, CERMET 10k
RV610	1-237-515-21	s	VAR, CERMET 1k
S100	1-553-977-00	s	SLIDE
S101	1-553-977-00	s	SLIDE
S200	1-553-977-00	s	SLIDE
S400	1-553-977-00	s	SLIDE
TH201	1-800-198-11	s	S-1K
TH202	1-800-202-XX	s	S-10K
TH501	1-800-198-11	s	S-1K
TH502	1-800-202-XX	s	S-10K

19) **TBC-8P BOARD**

This board includes the NR-25 board.

1)	A-6711-889-B	o	MOUNTED CIRCUIT BOARD, TBC-8P
2)	A-6711-889-C	o	MOUNTED CIRCUIT BOARD, TBC-8P

Ref.No.	Parts No.	SP	Description
C100	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C101	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C104	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C105	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C106	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C107	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C108	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C113	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C114	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C117	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C118	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C120	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C122	1-162-638-11	s	CERAMIC CHIP 1 16V
C137	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C138	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C139	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C140	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C142	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C144	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C145	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C146	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C147	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C200	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C201	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C202	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C205	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C207	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C208	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C210	1-162-638-11	s	CERAMIC CHIP 1 16V
C211	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C212	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C213	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C214	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C216	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C218	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C219	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C221	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C222	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C300	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C301	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C400	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C401	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C402	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C403	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C408	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C409	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C420	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C421	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C422	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C423	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C428	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C442	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C443	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C444	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C500	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C501	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C502	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C503	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C504	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C507	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C509	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C511	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C512	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C513	1-162-638-11	s	CERAMIC CHIP 1 16V
C514	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C518	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C520	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C521	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C523	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C524	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C525	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C526	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C527	1-162-638-11	s	CERAMIC CHIP 1 16V
C530	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C532	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C535	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C536	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C540	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C543	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C901	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C902	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C904	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C906	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C911	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C913	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C915	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C917	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C918	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C920	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
CN106	1-506-746-11	s	DIN 48P
5) CN107	1-506-748-31	s	DIN 96P
6) CN107	1-506-748-11	s	DIN 96P

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

	Ref.No.	Parts No.	SP	Description
12)	CV101	1-141-245-00	s	VAR 30pF
13)	CV101	1-141-404-11	s	TRIMMER, CERAMIC 30pF
12)	CV102	1-141-245-00	s	VAR 30pF
13)	CV102	1-141-404-11	s	TRIMMER, CERAMIC 30pF
12)	CV103	1-141-245-00	s	VAR 30pF
13)	CV103	1-141-404-11	s	TRIMMER, CERAMIC 30pF
	D201	8-719-105-52	s	RD3.6M-B2
	D202	8-719-101-23	s	1SS123
	D400	8-719-101-23	s	1SS123
	D500	8-719-106-17	s	RD6.8M-B2
	D501	8-719-106-17	s	RD6.8M-B2
	IC100	8-759-012-13	s	MC10H125M (MOTOROLA)
	IC101	8-759-942-28	s	CXD1022CQ (SONY)
	IC102	8-759-208-76	s	CXD1023AQ (SONY)
	IC103	8-749-901-39	s	SBX4001-01 (FUJITSU)
	IC104	8-759-201-41	s	TD62901P (TOSHIBA)
	IC106	8-759-745-64	s	NJM4560M (JRC)
	IC107	8-759-945-29	s	TL601CPS (TI)
	IC108	8-759-904-80	s	74F04PC (FSC)
	IC109	8-759-204-96	s	TC74HC04F (TOSHIBA)
	IC110	8-759-204-96	s	TC74HC04F (TOSHIBA)
	IC112	8-759-948-35	s	CXD1309BQ (SONY)
	IC113	8-759-948-37	s	CXD1326AQ (SONY)
	IC114	8-759-930-50	s	SN74LS157NS (TI)
	IC200	8-752-322-72	s	CXK1202S (SONY)
	IC201	8-759-208-88	s	CXD1131Q (SONY)
	IC202	8-759-745-64	s	NJM4560M (JRC)
	IC203	8-759-933-52	s	MB40778P (FUJITSU)
	IC204	8-759-745-64	s	NJM4560M (JRC)
	IC400	8-759-942-28	s	CXD1022CQ (SONY)
	IC401	8-759-208-76	s	CXD1023AQ (SONY)
	IC402	8-749-901-39	s	SBX4001-01 (FUJITSU)
	IC403	8-759-205-08	s	TC74HC86F (TOSHIBA)
	IC404	8-759-205-21	s	TC74HC221F (TOSHIBA)
	IC405	8-749-901-21	s	BX1461 (SONY)
	IC406	8-759-200-81	s	TC4053BF (TOSHIBA)
	IC407	8-759-908-17	s	TL082CPS (TI)
	IC408	8-759-907-81	s	SN74LS221NS (TI)
	IC409	8-759-204-96	s	TC74HC04F (TOSHIBA)
	IC500	8-752-322-72	s	CXK1202S (SONY)
	IC501	8-752-322-72	s	CXK1202S (SONY)
	IC502	8-759-208-88	s	CXD1131Q (SONY)
	IC503	8-759-012-13	s	MC10H125M (MOTOROLA)
	IC504	8-759-204-94	s	TC74HC00F (TOSHIBA)
	IC505	8-759-001-98	s	MC10198L (MOTOROLA)
	IC506	8-759-933-52	s	MB40778P (FUJITSU)
	IC507	8-759-933-52	s	MB40778P (FUJITSU)
	IC508	8-759-907-81	s	SN74LS221NS (TI)
	IC509	8-759-745-64	s	NJM4560M (JRC)
	IC510	8-759-204-98	s	TC74HC08F (TOSHIBA)
	IC512	8-759-205-03	s	TC74HC27F (TOSHIBA)
	IC900	8-759-914-44	s	TL431CLPB (TI)

	Ref.No.	Parts No.	SP	Description
	L100	1-410-470-11	s	MICRO 10
	L101	1-410-470-11	s	MICRO 10
	L102	1-410-470-11	s	MICRO 10
	L103	1-410-470-11	s	MICRO 10
	L200	1-410-478-11	s	MICRO 47
	L201	1-410-478-11	s	MICRO 47
	L202	1-410-478-11	s	MICRO 47
	L203	1-410-478-11	s	MICRO 47
	L300	1-410-478-11	s	MICRO 47
	L301	1-410-478-11	s	MICRO 47
	L400	1-410-470-11	s	MICRO 10
	L401	1-410-470-11	s	MICRO 10
	L500	1-410-478-11	s	MICRO 47
	L501	1-410-478-11	s	MICRO 47
	L502	1-410-478-11	s	MICRO 47
	L503	1-410-478-11	s	MICRO 47
	L504	1-410-478-11	s	MICRO 47
	L505	1-410-478-11	s	MICRO 47
	L900	1-421-329-00	s	CHOKE
	L901	1-421-329-00	s	CHOKE
	L902	1-421-329-00	s	CHOKE
	L903	1-421-329-00	s	CHOKE
	L904	1-421-329-00	s	CHOKE
	Q201	8-729-100-66	s	2SC1623
	Q202	8-729-102-06	s	2SC2223
	Q203	8-729-102-06	s	2SC2223
	Q204	8-729-100-66	s	2SC1623
	Q205	8-729-109-44	s	2SK94
	Q400	8-729-100-66	s	2SC1623
	Q401	8-729-100-76	s	2SA812
	Q402	8-729-100-76	s	2SA812
	Q500	8-729-100-66	s	2SC1623
	Q501	8-729-100-66	s	2SC1623
	Q502	8-729-100-66	s	2SC1623
	Q503	8-729-100-66	s	2SC1623
	Q504	8-729-100-66	s	2SC1623
	Q505	8-729-100-66	s	2SC1623
	Q900	8-729-106-68	s	2SD1615A-GP
	R138	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
	R139	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
	R140	1-216-680-11	s	METAL CHIP 16k 0.50% 1/10W
	R141	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
	R142	1-216-662-11	s	METAL CHIP 3k 0.50% 1/10W
	R143	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
	R144	1-216-676-11	s	METAL CHIP 11k 0.50% 1/10W
	R145	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
	R146	1-216-672-11	s	METAL CHIP 7.5k 0.50% 1/10W
	R202	1-216-672-11	s	METAL CHIP 7.5k 0.50% 1/10W
	R203	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
	R204	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
	R205	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
	R206	1-216-674-11	s	METAL CHIP 9.1k 0.50% 1/10W
1)	R208	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
2)	R208	1-216-677-11	s	METAL CHIP 12k 0.50% 1/10W
	R209	1-216-676-11	s	METAL CHIP 11k 0.50% 1/10W
	R214	1-216-619-11	s	METAL CHIP 47 0.50% 1/10W
	R216	1-216-660-11	s	METAL CHIP 2.4k 0.50% 1/10W
	R217	1-216-672-11	s	METAL CHIP 7.5k 0.50% 1/10W

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description		
R220	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R223	1-216-678-11	s	METAL CHIP 13k	0.50%	1/10W
R224	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R225	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R226	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R227	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R229	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R418	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R424	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R425	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R426	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R427	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R428	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
2) R430	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R431	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R432	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R433	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R510	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R511	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R512	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R513	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R514	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R515	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R520	1-216-646-11	s	METAL CHIP 620	0.50%	1/10W
R521	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R524	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
R529	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R530	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R535	1-216-646-11	s	METAL CHIP 620	0.50%	1/10W
R536	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R539	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
1) R540	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
2) R540	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R541	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R542	1-216-678-11	s	METAL CHIP 13k	0.50%	1/10W
R546	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R549	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W
R571	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R572	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R573	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
7) R605	1-216-685-11	s	METAL CHIP 27k	0.50%	1/10W
8) R605	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R901	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R902	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
RV200	1-237-501-21	s	VAR, CERMET 2k		
RV400	1-237-514-21	s	VAR, CERMET 500		
RV500	1-237-501-21	s	VAR, CERMET 2k		
RV501	1-237-501-21	s	VAR, CERMET 2k		
RV502	1-237-499-21	s	VAR, CERMET 500		
8) RV601	1-237-518-21	s	VAR, CERMET 10k		
S500	1-554-149-00	s	DIP		

Ref.No.	Parts No.	SP	Description		
TBC-9P BOARD					
1)	A-6711-890-A	o	MOUNTED CIRCUIT BOARD, TBC-9P		
2)	A-6711-890-B	o	MOUNTED CIRCUIT BOARD, TBC-9P		
C3	1-162-638-11	s	CERAMIC CHIP 1		16V
C4	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C5	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C9	1-135-083-00	s	TANTAL CHIP 0.47	10%	25V
C10	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C13	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C15	1-124-462-00	s	ELECT 10	20%	16V
C17	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C19	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C20	1-135-083-00	s	TANTAL CHIP 0.47	10%	25V
C21	1-124-462-00	s	ELECT 10	20%	16V
C22	1-124-462-00	s	ELECT 10	20%	16V
C24	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C25	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C27	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C32	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C33	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C35	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C36	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C38	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C39	1-162-638-11	s	CERAMIC CHIP 1		16V
C41	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C43	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C45	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C47	1-162-638-11	s	CERAMIC CHIP 1		16V
C49	1-163-241-00	s	CERAMIC CHIP 39pF	5%	50V
C50	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C52	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C55	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C59	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C60	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C64	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C66	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C73	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C75	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C77	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C79	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C81	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C83	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C86	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C89	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C91	1-135-083-00	s	TANTAL CHIP 0.47	10%	25V
C92	1-124-462-00	s	ELECT 10	20%	16V
C93	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C96	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C98	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C99	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C101	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C104	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C105	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C106	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C107	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C108	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V

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Ref.No.	Parts No.	SP	Description
C109	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C111	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C113	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C114	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C115	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C117	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C119	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C123	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C124	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C125	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C126	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C127	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C129	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C132	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C134	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C137	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C200	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C201	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C203	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C204	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C208	1-135-091-00	s	TANTAL CHIP 1 10% 16V
C210	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C214	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C215	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C216	1-135-096-91	s	TANTAL CHIP 4.7 20% 10V
C301	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C302	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
5) CN101	1-506-748-31	s	DIN 96P
6) CN101	1-506-748-11	s	DIN 96P
CP1	1-577-295-11	s	OSCILLATOR 17.734475MHz
CP2	1-577-294-11	s	OSCILLATOR 14.1875MHz
CP3	1-577-294-11	s	OSCILLATOR 14.1875MHz
D1	8-719-100-03	s	1S2835
D2	8-719-101-23	s	1SS123
D3	8-719-101-23	s	1SS123
D4	8-719-101-23	s	1SS123
D5	8-719-101-23	s	1SS123
D200	8-719-101-23	s	1SS123
D201	8-719-105-58	s	RD3.9M-B2
D202	8-719-101-23	s	1SS123
D203	8-719-100-03	s	1S2835
D204	8-719-106-08	s	RD6.2M-B2
D205	8-719-911-19	s	1SS119
IC1	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC2	8-752-006-12	s	CX20061 (SONY)
IC4	8-752-335-47	s	CXD1216M (SONY)
IC5	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC6	8-752-332-67	s	CXD1217M (SONY)
IC7	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC8	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC9	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC10	8-752-332-67	s	CXD1217M (SONY)
IC11	8-759-205-08	s	TC74HC86F (TOSHIBA)

Ref.No.	Parts No.	SP	Description
IC12	8-759-908-17	s	TL082CPS (TI)
IC13	8-759-902-88	s	SN74LS123NS (TI)
IC14	8-759-700-95	s	NJM1496M (JRC)
IC16	8-759-205-05	s	TC74HC32F (TOSHIBA)
IC17	8-759-100-93	s	uPC393G2 (NEC)
IC18	8-759-908-17	s	TL082CPS (TI)
IC19	8-759-206-28	s	TC74HC123F (TOSHIBA)
IC20	8-759-908-15	s	TL431CLP (TI)
IC21	8-752-335-47	s	CXD1216M (SONY)
IC22	8-759-207-66	s	CXD1024Q (SONY)
IC23	8-752-332-67	s	CXD1217M (SONY)
IC24	8-759-918-35	s	CX20162 (SONY)
IC25	8-759-904-84	s	74F74PC (FSC)
IC26	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC27	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC28	8-759-204-96	s	TC74HC04F (TOSHIBA)
IC29	8-759-205-23	s	TC74HC244F (TOSHIBA)
IC30	8-759-930-57	s	SN74LS164NS (TI)
IC31	8-759-012-02	s	MC10H124M (MOTOROLA)
IC32	8-759-205-23	s	TC74HC244F (TOSHIBA)
IC33	8-759-206-28	s	TC74HC123F (TOSHIBA)
IC34	8-759-929-83	s	SN74LS11NS (TI)
IC35	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC36	8-759-930-57	s	SN74LS164NS (TI)
IC37	8-759-908-15	s	TL431CLP (TI)
IC40	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC41	8-759-907-81	s	SN74LS221NS (TI)
IC42	8-759-907-81	s	SN74LS221NS (TI)
IC43	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC200	8-759-941-27	s	MB4002PF (FUJITSU)
IC201	8-759-908-17	s	TL082CPS (TI)
IC202	8-759-945-29	s	TL601CPS (TI)
IC203	8-759-105-49	s	uPC319G2 (NEC)
IC204	8-759-205-21	s	TC74HC221F (TOSHIBA)
L1	1-410-478-11	s	MICRO 47
L2	1-410-478-11	s	MICRO 47
L3	1-410-478-11	s	MICRO 47
L4	1-410-478-11	s	MICRO 47
L5	1-410-478-11	s	MICRO 47
L6	1-410-478-11	s	MICRO 47
L7	1-410-478-11	s	MICRO 47
L8	1-410-478-11	s	MICRO 47
L9	1-410-478-11	s	MICRO 47
L10	1-410-478-11	s	MICRO 47
L11	1-410-478-11	s	MICRO 47
L12	1-410-478-11	s	MICRO 47
L15	1-410-470-11	s	MICRO 10
L16	1-410-478-11	s	MICRO 47
L17	1-410-478-11	s	MICRO 47
L19	1-410-478-11	s	MICRO 47
L20	1-410-478-11	s	MICRO 47
L21	1-410-478-11	s	MICRO 47
L22	1-410-478-11	s	MICRO 47
L23	1-410-478-11	s	MICRO 47
L24	1-410-478-11	s	MICRO 47
L25	1-410-478-11	s	MICRO 47
L26	1-410-478-11	s	MICRO 47
L27	1-410-478-11	s	MICRO 47
L28	1-421-329-00	s	CHOKE

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Ref.No.	Parts No.	SP	Description
L29	1-421-329-00	s	CHOKE
L31	1-421-329-00	s	CHOKE
L32	1-421-329-00	s	CHOKE
L34	1-421-329-00	s	CHOKE
L35	1-410-478-11	s	MICRO 47
L200	1-410-478-11	s	MICRO 47
L201	1-410-482-31	s	MICRO 100
L202	1-410-478-11	s	MICRO 47
Q1	8-729-100-66	s	2SC1623
Q2	8-729-100-66	s	2SC1623
Q3	8-729-100-66	s	2SC1623
Q6	8-729-100-76	s	2SA812
Q7	8-729-100-66	s	2SC1623
Q8	8-729-100-76	s	2SA812
Q9	8-729-100-66	s	2SC1623
Q10	8-729-100-66	s	2SC1623
Q11	8-729-100-66	s	2SC1623
Q12	8-729-100-66	s	2SC1623
Q13	8-729-100-66	s	2SC1623
Q14	8-729-122-63	s	2SA1226
Q15	8-729-100-66	s	2SC1623
Q16	8-729-100-66	s	2SC1623
Q17	8-729-122-63	s	2SA1226
Q18	8-729-100-66	s	2SC1623
Q19	8-729-100-66	s	2SC1623
Q20	8-729-106-68	s	2SD1615A-GP
Q200	8-729-100-66	s	2SC1623
Q201	8-729-109-44	s	2SK94
Q202	8-729-109-44	s	2SK94
Q203	8-729-100-66	s	2SC1623
Q204	8-729-109-44	s	2SK94
Q205	8-729-100-66	s	2SC1623
R23	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R24	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
1) R28	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
2) R28	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R29	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
1) R34	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
2) R34	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
1) R35	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
2) R35	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R39	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
R40	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
1) R42	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
22) R42	1-216-653-11	s	METAL CHIP 1.2k 0.50% 1/10W
20) R42	1-216-656-11	s	METAL CHIP 1.6k 0.50% 1/10W
R43	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R47	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R48	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
R49	1-216-681-11	s	METAL CHIP 18k 0.50% 1/10W
R50	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R53	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R55	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R56	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R58	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R60	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R61	1-216-636-11	s	METAL CHIP 240 0.50% 1/10W

Ref.No.	Parts No.	SP	Description
R62	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R63	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
R65	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R68	1-216-674-11	s	METAL CHIP 9.1k 0.50% 1/10W
R69	1-216-650-11	s	METAL CHIP 910 0.50% 1/10W
R70	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R74	1-216-667-11	s	METAL CHIP 4.7k 0.50% 1/10W
1) R75	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
2) R75	1-216-641-11	s	METAL CHIP 390 0.50% 1/10W
R76	1-216-018-00	s	CHIP 51 5% 1/10W
R77	1-216-018-00	s	CHIP 51 5% 1/10W
R78	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R79	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R80	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R81	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R82	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R83	1-216-635-11	s	METAL CHIP 220 0.50% 1/10W
R86	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R87	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R88	1-216-643-11	s	METAL CHIP 470 0.50% 1/10W
R92	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R93	1-216-699-11	s	METAL CHIP 100k 0.50% 1/10W
R94	1-216-679-11	s	METAL CHIP 15k 0.50% 1/10W
R95	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R97	1-216-674-11	s	METAL CHIP 9.1k 0.50% 1/10W
R98	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R103	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R104	1-216-660-11	s	METAL CHIP 2.4k 0.50% 1/10W
R105	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R108	1-216-690-11	s	METAL CHIP 43k 0.50% 1/10W
R109	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R110	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R120	1-216-658-11	s	METAL CHIP 13k 0.50% 1/10W
R138	1-216-673-11	s	METAL CHIP 8.2k 0.50% 1/10W
R139	1-216-665-11	s	METAL CHIP 3.9k 0.50% 1/10W
R181	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R182	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R183	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R184	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R185	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
R186	1-216-685-11	s	METAL CHIP 27k 0.50% 1/10W
R189	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
R216	1-216-649-11	s	METAL CHIP 820 0.50% 1/10W
R221	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R222	1-216-651-11	s	METAL CHIP 1k 0.50% 1/10W
R229	1-216-669-11	s	METAL CHIP 5.6k 0.50% 1/10W
R230	1-216-683-11	s	METAL CHIP 22k 0.50% 1/10W
1) R332	1-216-661-11	s	METAL CHIP 2.7k 0.50% 1/10W
22) R332	1-216-659-11	s	METAL CHIP 2.2k 0.50% 1/10W
20) R332	1-216-657-11	s	METAL CHIP 1.8k 0.50% 1/10W
1) R333	1-216-671-11	s	METAL CHIP 6.8k 0.50% 1/10W
2) R333	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
RV1	1-237-517-21	s	VAR, CERMET 5k
RV2	1-237-517-21	s	VAR, CERMET 5k
RV3	1-237-517-21	s	VAR, CERMET 5k
RV4	1-237-519-21	s	VAR, CERMET 20k
RV5	1-237-516-21	s	VAR, CERMET 2k

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Ref.No.	Parts No.	SP	Description
RV6	1-237-517-21	s	VAR, CERMET 1k
RV7	1-237-514-21	s	VAR, CERMET 500
RV8	1-237-518-21	s	VAR, CERMET 10k
RV9	1-237-514-21	s	VAR, CERMET 500
RV10	1-237-518-21	s	VAR, CERMET 10k
RV11	1-237-517-21	s	VAR, CERMET 5k
RV12	1-237-518-21	s	VAR, CERMET 10k
RV13	1-237-518-21	s	VAR, CERMET 10k
RV14	1-237-518-21	s	VAR, CERMET 10k
RV15	1-237-517-21	s	VAR, CERMET 5k
S3	1-554-150-00	s	DIP
S4	1-554-150-00	s	DIP
TH1	1-800-202-XX	s	S-10K

20) TBC-12P BOARD

This board includes the NR-32 board.

	A-6726-078-A	o	MOUNTED CIRCUIT BOARD, TBC-12P
C100	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C101	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C102	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C103	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C104	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C105	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C106	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C107	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C108	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C109	1-162-638-11	s	CERAMIC CHIP 1 16V
C110	1-162-638-11	s	CERAMIC CHIP 1 16V
C113	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C114	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C117	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C118	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C120	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C122	1-162-638-11	s	CERAMIC CHIP 1 16V
C137	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C138	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C139	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C140	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C142	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C144	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C145	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C146	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C147	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C200	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C201	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C202	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C205	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C207	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C208	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C210	1-162-638-11	s	CERAMIC CHIP 1 16V
C211	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C212	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C213	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C214	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C216	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C218	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C221	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C222	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C300	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C301	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C400	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C401	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C402	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C403	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C404	1-162-638-11	s	CERAMIC CHIP 1 16V
C405	1-162-638-11	s	CERAMIC CHIP 1 16V
C408	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C409	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C420	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C421	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C422	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C423	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C428	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C442	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C443	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C444	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C500	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C501	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C502	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C503	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C504	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C507	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C509	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C511	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C512	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C513	1-162-638-11	s	CERAMIC CHIP 1 16V
C514	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C518	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C520	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C521	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C523	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C524	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C525	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C526	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C527	1-162-638-11	s	CERAMIC CHIP 1 16V
C530	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C532	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C535	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C536	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C540	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C543	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C603	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C801	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C802	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C803	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C804	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C805	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C807	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C808	1-162-637-11	s	CERAMIC CHIP 0.47 16V
C901	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C902	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C904	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V

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Ref.No.	Parts No.	SP	Description
C906	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C911	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C913	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C915	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C917	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C918	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
C920	1-163-037-11	s	CERAMIC CHIP 0.022 10% 25V
CN106	1-569-465-11	s	DIN 48P
CN107	1-568-144-11	s	DIN 96P
CN700	1-566-421-11	o	HEADER 50P
CN800	1-564-359-00	o	HEADER 20P
CV102	1-141-404-11	s	VAR, TRIMMER 30pF
CV103	1-141-404-11	s	VAR, TRIMMER 30pF
D201	8-719-105-52	s	RD3.6M-B2
D202	8-719-104-34	s	1S2836
D400	8-719-100-03	s	1S2835
D500	8-719-106-17	s	RD6.8M-B2
D501	8-719-106-17	s	RD6.8M-B2
D801	8-719-100-03	s	1S2835
D802	8-719-100-03	s	1S2835
D803	8-719-100-03	s	1S2835
D900	8-719-100-03	s	1S2835
DL250	1-415-546-11	s	50ns
IC100	8-759-012-13	s	MC10H125M (MOTOROLA)
IC101	8-759-987-09	s	CXD8011AQ (SONY)
IC102	8-759-208-76	s	CXD1023AQ (SONY)
IC103	8-749-901-39	s	SBX4001-01 (FUJITSU)
IC104	8-759-201-41	s	TD62901P (TOSHIBA)
IC106	8-759-981-96	s	RC4560M (RAYTHEON)
IC107	8-759-945-29	s	TL601CPS (TI)
IC108	8-759-915-41	s	74F02PC (FSC)
IC109	8-759-204-96	s	TC74HC04F (TOSHIBA)
IC110	8-759-204-96	s	TC74HC04F (TOSHIBA)
IC112	8-759-983-11	s	CXD8024Q (SONY)
IC113	8-759-948-37	s	CXD1326AQ (SONY)
IC114	8-759-930-50	s	SN74LS157NS (TI)
IC200	8-759-147-05	s	uPD42101G-3 (NEC)
IC201	8-759-208-88	s	CXD1131Q (SONY)
IC202	8-759-981-96	s	RC4560M (RAYTHEON)
IC203	8-759-933-52	s	MB40778P (FUJITSU)
IC204	8-759-981-96	s	RC4560M (RAYTHEON)
IC400	8-759-987-09	s	CXD8011AQ (SONY)
IC401	8-759-208-76	s	CXD1023AQ (SONY)
IC402	8-749-901-39	s	SBX4001-01 (FUJITSU)
IC403	8-759-205-08	s	TC74HC86F (TOSHIBA)
IC404	8-759-205-21	s	TC74HC221F (TOSHIBA)
IC405	8-749-901-21	s	BX1461 (SONY)
IC406	8-759-208-11	s	TC4053BFFHB (TOSHIBA)
IC407	8-759-908-17	s	TL082CPS (TI)
IC408	8-759-907-81	s	SN74LS221NS (TI)
IC409	8-759-204-96	s	TC74HC04F (TOSHIBA)
IC500	8-759-144-87	s	uPD41101G-1 (NEC)
IC501	8-759-144-87	s	uPD41101G-1 (NEC)

Ref.No.	Parts No.	SP	Description
IC502	8-759-208-88	s	CXD1131Q (SONY)
IC504	8-759-204-94	s	TC74HC00F (TOSHIBA)
IC505	8-759-001-98	s	MC10198L (MOTOROLA)
IC506	8-759-933-52	s	MB40778P (FUJITSU)
IC507	8-759-933-52	s	MB40778P (FUJITSU)
IC508	8-759-907-81	s	SN74LS221NS (TI)
IC509	8-759-981-96	s	RC4560M (RAYTHEON)
IC510	8-759-204-98	s	TC74HC08F (TOSHIBA)
IC512	8-759-925-85	s	SN74HC32NS (TI)
IC601	8-759-205-06	s	TC74HC74F (TOSHIBA)
IC603	8-759-930-50	s	SN74LSI157NS (TI)
IC801	8-759-925-84	s	SN74HC30NS (TI)
IC802	8-759-925-84	s	SN74HC30NS (TI)
IC803	8-759-925-84	s	SN74HC30NS (TI)
IC804	8-759-205-37	s	TC74HC574F (TOSHIBA)
IC805	8-759-205-37	s	TC74HC574F (TOSHIBA)
IC806	8-759-144-87	s	uPD41101G-1 (NEC)
IC807	8-759-926-76	s	SN74HC540NS (TI)
IC810	8-759-012-02	s	MC10H124M (MOTOROLA)
IC811	8-759-012-02	s	MC10H124M (MOTOROLA)
IC812	8-759-012-02	s	MC10H124M (MOTOROLA)
IC813	8-759-904-80	s	74F04PC (FSC)
IC814	8-759-205-37	s	TC74HC574F (TOSHIBA)
IC815	8-759-144-87	s	uPD41101G-1 (NEC)
IC816	8-759-205-37	s	TC74HC574F (TOSHIBA)
IC900	8-759-929-26	s	TL431CPS (TI)
IC901	8-759-982-25	s	RC78L09A (RAYTHEON)
L100	1-410-470-11	s	MICRO 10
L101	1-410-470-11	s	MICRO 10
L102	1-410-470-11	s	MICRO 10
L103	1-410-470-11	s	MICRO 10
L200	1-410-478-11	s	MICRO 47
L201	1-410-478-11	s	MICRO 47
L203	1-410-478-11	s	MICRO 47
L300	1-410-478-11	s	MICRO 47
L301	1-410-478-11	s	MICRO 47
L400	1-410-470-11	s	MICRO 10
L401	1-410-470-11	s	MICRO 10
L500	1-410-478-11	s	MICRO 47
L502	1-410-478-11	s	MICRO 47
L504	1-410-478-11	s	MICRO 47
L505	1-410-478-11	s	MICRO 47
L900	1-421-329-00	s	CHOKE
L901	1-421-329-00	s	CHOKE
L902	1-421-329-00	s	CHOKE
L903	1-421-329-00	s	CHOKE
L904	1-421-329-00	s	CHOKE
Q201	8-729-100-66	s	2SC1623
Q202	8-729-102-07	s	2SC2223-F13
Q203	8-729-102-07	s	2SC2223-F13
Q204	8-729-100-66	s	2SC1623
Q205	8-729-109-43	s	2SK94-X3
Q250	8-729-100-66	s	2SC1623
Q251	8-729-100-76	s	2SA812
Q400	8-729-100-66	s	2SC1623
Q401	8-729-100-76	s	2SA812
Q402	8-729-100-76	s	2SA812

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Ref.No.	Parts No.	SP	Description		
Q500	8-729-100-66	s	2SC1623		
Q501	8-729-100-66	s	2SC1623		
Q502	8-729-100-66	s	2SC1623		
Q503	8-729-100-66	s	2SC1623		
Q504	8-729-100-66	s	2SC1623		
Q505	8-729-100-66	s	2SC1623		
Q801	8-729-900-53	s	DTC114EK		
Q802	8-729-900-53	s	DTC114EK		
Q803	8-729-900-53	s	DTC114EK		
Q900	8-729-106-68	s	2SD1615A-GP		
R138	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R139	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R140	1-216-680-11	s	METAL CHIP 16k	0.50%	1/10W
R141	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R142	1-216-662-11	s	METAL CHIP 3k	0.50%	1/10W
R143	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R144	1-216-676-11	s	METAL CHIP 11k	0.50%	1/10W
R145	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R146	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R202	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R203	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R204	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R205	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R206	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R208	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R209	1-216-676-11	s	METAL CHIP 11k	0.50%	1/10W
R216	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R217	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R220	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R223	1-216-678-11	s	METAL CHIP 13k	0.50%	1/10W
R229	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R254	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
R255	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
R256	1-216-623-11	s	METAL CHIP 68	0.50%	1/10W
R257	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R258	1-216-656-11	s	METAL CHIP 1.6k	0.50%	1/10W
R260	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R261	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R262	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R266	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
R268	1-216-658-11	s	METAL CHIP 2k	0.50%	1/10W
R269	1-216-642-11	s	METAL CHIP 430	0.50%	1/10W
R270	1-216-648-11	s	METAL CHIP 750	0.50%	1/10W
R273	1-217-666-31	s	SHORT 0.01		1/6W
R418	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R424	1-216-683-11	s	METAL CHIP 22k	0.50%	1/10W
R425	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
R426	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R427	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R428	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
R430	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R432	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R433	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R510	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R511	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R512	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R513	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R514	1-216-661-11	s	METAL CHIP 2.7k	0.50%	1/10W
R515	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R520	1-216-646-11	s	METAL CHIP 620	0.50%	1/10W

Ref.No.	Parts No.	SP	Description		
R521	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R524	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
R529	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R530	1-216-674-11	s	METAL CHIP 9.1k	0.50%	1/10W
R535	1-216-646-11	s	METAL CHIP 620	0.50%	1/10W
R536	1-216-653-11	s	METAL CHIP 1.2k	0.50%	1/10W
R539	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
R540	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R541	1-216-660-11	s	METAL CHIP 2.4k	0.50%	1/10W
R542	1-216-678-11	s	METAL CHIP 13k	0.50%	1/10W
R546	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R549	1-216-682-11	s	METAL CHIP 20k	0.50%	1/10W
R571	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R572	1-216-635-11	s	METAL CHIP 220	0.50%	1/10W
R573	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R605	1-216-679-11	s	METAL CHIP 15k	0.50%	1/10W
R901	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R902	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
RV200	1-237-501-21	s	VAR, CERMET 2k		
RV250	1-237-501-21	s	VAR, CERMET 2k		
S500	1-554-149-21	s	DIP		

TC-40AP BOARD

	A-6717-488-A	o	MOUNTED CIRCUIT BOARD, TC-40AP		
C59	1-124-236-00	s	ELECT 47	20%	16V
C218	1-124-236-00	s	ELECT 47	20%	16V
C219	1-124-236-00	s	ELECT 47	20%	16V
C221	1-124-236-00	s	ELECT 47	20%	16V
C222	1-126-103-11	s	ELECT 470	20%	16V
C223	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C224	1-126-103-11	s	ELECT 470	20%	16V
C225	1-163-037-11	s	CERAMIC CHIP 0.022	10%	25V
C229	1-124-236-00	s	ELECT 47	20%	16V
C230	1-124-236-00	s	ELECT 47	20%	16V
C231	1-124-462-00	s	ELECT 10	20%	16V
C233	1-124-236-00	s	ELECT 47	20%	16V
C234	1-124-236-00	s	ELECT 47	20%	16V
C236	1-124-236-00	s	ELECT 47	20%	16V
C239	1-124-236-00	s	ELECT 47	20%	16V
C240	1-124-236-00	s	ELECT 47	20%	16V
C241	1-124-236-00	s	ELECT 47	20%	16V
C242	1-124-236-00	s	ELECT 47	20%	16V
C246	1-124-499-11	s	ELECT 1	20%	50V
C253	1-124-236-00	s	ELECT 47	20%	16V
C254	1-124-236-00	s	ELECT 47	20%	16V
C272	1-126-103-11	s	ELECT 470	20%	16V
C273	1-126-103-11	s	ELECT 470	20%	16V
C276	1-124-899-00	s	ELECT 22	20%	16V
C277	1-124-899-00	s	ELECT 22	20%	16V
C279	1-124-236-00	s	ELECT 47	20%	16V
C280	1-124-499-11	s	ELECT 1	20%	50V
9) C403	1-124-236-00	s	ELECT 47	20%	16V

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Ref.No.	Parts No.	SP	Description
5) CN205	1-506-748-31	s	DIN 96P
6) CN205	1-506-748-11	s	DIN 96P
D206	8-719-100-03	s	1S2835
D207	8-719-101-23	s	1SS123
IC204	8-759-700-07	s	NJM2903M (JRC)
IC205	8-759-208-09	s	TC4052BFHB (TOSHIBA)
9) IC206	8-759-908-17	s	TL082CPS (TI)
10) IC206	8-759-700-78	s	NUM082M (JRC)
IC208	8-759-700-43	s	NJM4558M (JRC)
IC209	8-759-208-11	s	TC4053BFHB (TOSHIBA)
IC210	8-759-700-43	s	NJM4558M (JRC)
IC211	8-759-705-62	s	NJM4562D-D (JRC)
IC212	8-759-200-90	s	TC4538BF (TOSHIBA)
IC213	8-759-200-77	s	TC4028BF (TOSHIBA)
IC214	8-759-204-06	s	TC4075BF (TOSHIBA)
IC215	8-759-745-56	s	NJM4556D (JRC)
L201	1-459-155-00	s	45 (WITH CORE)
L202	1-459-155-00	s	45 (WITH CORE)
Q209	8-729-202-38	s	2SC3326N
Q210	8-729-202-38	s	2SC3326N
Q211	8-729-271-22	s	2SC2712-G
Q212	8-729-271-22	s	2SC2712-G
Q213	8-729-220-93	s	2SK209G
Q214	8-729-109-11	s	DTA144EK
Q215	8-729-109-44	s	DTA144EK
9) Q216	8-729-901-01	s	DTC144EK
R238	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R337	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R338	1-216-647-11	s	METAL CHIP 680 0.50% 1/10W
R341	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R342	1-216-676-11	s	METAL CHIP 11k 0.50% 1/10W
R343	1-216-624-11	s	METAL CHIP 75 0.50% 1/10W
R344	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R345	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R346	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R347	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R348	1-216-663-11	s	METAL CHIP 3.3k 0.50% 1/10W
R349	1-216-675-11	s	METAL CHIP 10k 0.50% 1/10W
R359	1-216-691-11	s	METAL CHIP 47k 0.50% 1/10W
RV201	1-237-516-21	s	VAR, CERMET 2k
RV202	1-237-516-21	s	VAR, CERMET 2k

TR-18 BOARD

	1-611-279-13	o	PRINTED CIRCUIT BOARD, TR-18
	8-749-020-80	s	DM-208

Ref.No.	Parts No.	SP	Description

VO-18AP BOARD

2) This board includes the DUS-270 board.

	A-6711-953-A	o	MOUNTED CIRCUIT BOARD, VO-18AP			
C3	1-124-584-00	s	ELECT	100	20%	10V
C5	1-124-584-00	s	ELECT	100	20%	10V
C15	1-124-224-00	s	ELECT	47	20%	6.3V
2) C18	1-163-111-00	s	CERAMIC CHIP	56pF	5%	50V
C27	1-124-236-00	s	ELECT	47	20%	10V
C29	1-124-236-00	s	ELECT	47	20%	10V
C30	1-124-222-00	s	ELECT	22	20%	6.3V
C32	1-123-611-00	s	ELECT	1	20%	50V
C45	1-124-584-00	s	ELECT	100	20%	10V
C48	1-124-584-00	s	ELECT	100	20%	10V
C55	1-124-584-00	s	ELECT	100	20%	10V
C56	1-124-584-00	s	ELECT	100	20%	10V
C70	1-124-584-00	s	ELECT	100	20%	10V
C76	1-124-225-00	s	ELECT	100	20%	6.3V
C78	1-124-224-00	s	ELECT	47	20%	6.3V
C87	1-124-224-00	s	ELECT	47	20%	6.3V
2) C501	1-163-105-00	s	CERAMIC CHIP	33pF	5%	50V
C608	1-124-899-00	s	ELECT	22	20%	25V
C611	1-124-499-11	s	ELECT	1	20%	50V
C613	1-124-499-11	s	ELECT	1	20%	50V
C616	1-124-225-00	s	ELECT	100	20%	6.3V
C628	1-124-899-00	s	ELECT	22	20%	25V
C631	1-124-499-11	s	ELECT	1	20%	50V
C633	1-124-499-11	s	ELECT	1	20%	50V
C646	1-124-899-00	s	ELECT	22	20%	25V
C648	1-124-899-00	s	ELECT	22	20%	25V
C651	1-136-157-00	s	MYLAR	0.022	10%	50V
C653	1-130-519-00	s	MYLAR	0.018	10%	50V
C700	1-163-809-11	s	CERAMIC CHIP	0.047	10%	25V
C702	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C703	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C704	1-124-462-00	s	ELECT	10	20%	16V
C705	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C706	1-124-462-00	s	ELECT	10	20%	16V
C707	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C710	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C713	1-163-037-00	s	CERAMIC CHIP	0.022	10%	25V
C714	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C715	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C716	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C718	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C719	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C720	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C721	1-124-462-00	s	ELECT	10	20%	16V
2) C722	1-124-234-00	s	ELECT	22	20%	10V
C723	1-124-234-00	s	ELECT	22	20%	10V
C724	1-124-229-00	s	ELECT	33	20%	10V
C725	1-124-224-00	s	ELECT	47	20%	6.3V
C726	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
C727	1-163-037-11	s	CERAMIC CHIP	0.022	10%	25V
1) C729	1-124-225-11	s	ELECT	100	20%	6.3V
2) C729	1-124-229-00	s	ELECT	33	20%	10V
2) C730	1-124-225-11	s	ELECT	100	20%	6.3V
2) C731	1-124-225-11	s	ELECT	100	20%	6.3V

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	Ref.No.	Parts No.	SP	Description
5)	CN103	1-506-748-31	s	DIN 96P
6)	CN103	1-506-748-11	s	DIN 96P
1)	CV1	1-141-245-11	s	TRIMMER 30pF
2)	CV1	1-141-260-11	s	TRIMMER 50pF
1)	CV3	1-141-304-21	s	TRIMMER 10pF
1)	D1	8-719-109-57	s	RD2.4ES-B2
2)	D1	8-719-101-23	s	1SS123
	D601	8-719-101-23	s	1SS123
	D602	8-719-101-23	s	1SS123
	D603	8-719-921-11	s	HZ2ALL
	D604	8-719-921-11	s	HZ2ALL
	D605	8-719-104-23	s	1SS123
	DL1	1-415-565-11	s	370ns
	DL2	1-415-543-11	s	300ns
	DL700	1-415-538-11	s	100ns
	FB601	1-535-178-00	s	FERRITE BEAD
	FB602	1-535-178-00	s	FERRITE BEAD
19)	FL1	1-236-005-11	s	LOW-PASS 5.5MHz
20)	FL1	1-236-393-11	s	LOW-PASS
	FL601	1-236-014-11	s	BANDPASS 310kHz
	FL602	1-236-015-11	s	BANDPASS 540kHz
	FL603	1-236-590-11	s	LOW-PASS 1.0MHz
	FL604	1-236-590-11	s	LOW-PASS 1.0MHz
	FL700	1-236-091-11	s	LOW-PASS 4.00MHz
	FL701	1-236-091-11	s	LOW-PASS 4.00MHz
	IC1	8-759-014-29	s	MC34184M (MOTOROLA)
	IC3	8-759-947-82	s	TL610CPS (TI)
	IC4	8-752-015-81	s	CX20158 (SONY)
	IC5	8-752-015-81	s	CX20158 (SONY)
	IC6	8-752-015-81	s	CX20158 (SONY)
	IC7	8-759-204-94	s	TC74HC00F (TOSHIBA)
	IC8	8-759-941-17	s	SN74LS06NS (TI)
	IC9	8-759-204-98	s	TC74HC08F (TOSHIBA)
	IC10	8-759-204-96	s	TC74HC04F (TOSHIBA)
	IC11	8-752-015-81	s	CX20158 (SONY)
	IC12	8-752-015-81	s	CX20158 (SONY)
	IC13	8-752-015-81	s	CX20158 (SONY)
	IC15	8-759-908-17	s	TL082CPS (TI)
	IC17	8-759-908-17	s	TL082CPS (TI)
	IC100	8-759-708-05	s	NJM78L05A (JRC)
	IC101	8-759-708-08	s	NJM78L08A (JRC)
	IC102	8-759-700-65	s	NJM79L05A (JRC)
	IC103	8-759-700-67	s	NJM79L08A (JRC)
	IC104	8-759-708-05	s	NJM78L05A (JRC)
	IC105	8-759-700-65	s	NJM79L05A (JRC)
	IC106	8-759-708-05	s	NJM78L05A (JRC)
	IC107	8-759-700-65	s	NJM79L05A (JRC)
	IC108	8-759-941-79	s	S-80230AG (SEIKO I AND E)
	IC109	8-759-708-08	s	NJM78L08A (JRC)
	IC110	8-759-700-65	s	NJM79L05A (JRC)

	Ref.No.	Parts No.	SP	Description
	IC111	8-759-937-61	s	S-81230AG (SEIKO I AND E)
	IC112	8-759-708-05	s	NJM78L05A (JRC)
	IC113	8-759-700-65	s	NJM79L05A (JRC)
	IC601	8-752-011-10	s	CX20111 (SONY)
	IC602	8-752-011-10	s	CX20111 (SONY)
	IC603	8-759-207-74	s	TC4030BFHB (TOSHIBA)
	IC604	8-759-700-43	s	NJM4558M (JRC)
	IC605	8-759-205-78	s	TC504013BF (TOSHIBA)
	IC606	8-759-200-90	s	TC4538BF (TOSHIBA)
	IC700	8-759-941-27	s	MB4002PF (FUJITSU)
1)	IC701	8-759-929-73	s	SN74LS00NS (TI)
2)	IC701	8-759-929-80	s	SN74LS08NS (TI)
	IC702	8-749-938-10	s	BX381 (SONY)
	IC703	8-759-908-17	s	TL082CPS (TI)
	IC704	8-759-100-93	s	uPC393G2 (JRC)
	IC705	8-759-206-28	s	TC74HC123F (TOSHIBA)
	IC706	8-759-947-82	s	TL610CPS (TI)
	IC707	8-752-015-81	s	CX20158 (SONY)
	IC708	8-759-929-78	s	SN74LS04NS (TI)
	L1	1-421-329-00	s	CHOKE
	L2	1-421-329-00	s	CHOKE
	L3	1-421-329-00	s	CHOKE
	L4	1-421-329-00	s	CHOKE
	L5	1-421-329-00	s	CHOKE
	L7	1-410-478-11	s	MICRO 47
	L8	1-410-478-11	s	MICRO 47
	L9	1-410-478-11	s	MICRO 47
	L12	1-410-478-11	s	MICRO 47
	L13	1-410-478-11	s	MICRO 47
	L14	1-410-478-11	s	MICRO 47
2)	L17	1-410-482-31	s	MICRO 100
	L19	1-410-467-21	s	MICRO 5.6
1)	L20	1-410-471-11	s	MICRO 12
	L701	1-410-478-11	s	MICRO 47
	L702	1-410-478-11	s	MICRO 47
	L703	1-410-478-11	s	MICRO 47
	L704	1-410-478-11	s	MICRO 47
	LV1	1-407-575-00	s	VAR 100
	LV2	1-407-575-00	s	VAR 100
1)	Q1	8-729-201-27	s	2SC2715-Y
2)	Q1	8-729-100-66	s	2SC1623
1)	Q2	8-729-201-27	s	2SC2715-Y
2)	Q2	8-729-100-66	s	2SC1623
	Q3	8-729-201-27	s	2SC2715-Y
	Q4	8-729-201-27	s	2SC2715-Y
	Q5	8-729-201-27	s	2SC2715-Y
	Q6	8-729-102-07	s	2SC2223-F13
	Q7	8-729-201-27	s	2SC2715-Y
	Q8	8-729-201-27	s	2SC2715-Y
	Q9	8-729-201-27	s	2SC2715-Y
	Q10	8-729-201-27	s	2SC2715-Y
1)	Q11	8-729-201-27	s	2SC2715-Y
2)	Q11	8-729-907-27	s	IMX1
1)	Q12	8-729-201-27	s	2SC2715-Y

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Ref.No.	Parts No.	SP	Description
1) Q13	8-729-122-63	s	2SA1226
Q14	8-729-201-27	s	2SC2715-Y
Q15	8-729-122-63	s	2SA1226
Q16	8-729-201-27	s	2SC2715-Y
Q17	8-729-201-27	s	2SC2715-Y
Q18	8-729-201-27	s	2SC2715-Y
1) Q19	8-729-312-22	s	2SA1122D
2) Q19	8-712-100-76	s	2SA812
Q20	8-729-201-27	s	2SC2715-Y
Q25	8-729-201-27	s	2SC2715-Y
1) Q26	8-729-312-22	s	2SA1122D
1) Q27	8-729-312-22	s	2SA1122D
2) Q27	8-712-100-76	s	2SA812
Q28	8-729-102-60	s	2SC1623
2) Q30	8-729-904-41	s	FMY3
Q31	8-729-122-63	s	2SA1226
Q32	8-729-201-27	s	2SC2715-Y
Q40	8-729-901-06	s	DTC144EK
1) Q401	8-729-102-60	s	2SC1623
2) Q501	8-712-100-76	s	2SA812
2) Q502	8-712-100-76	s	2SA812
2) Q503	8-729-902-96	s	FMS1
2) Q504	8-729-903-10	s	FMW1
Q601	8-729-271-22	s	2SC2712-G
Q602	8-729-271-22	s	2SC2712-G
Q603	8-729-271-22	s	2SC2712-G
Q604	8-729-271-22	s	2SC2712-G
Q605	8-729-271-22	s	2SC2712-G
1) Q606	8-729-901-06	s	DTC144EK
Q700	8-729-201-27	s	2SC2715-Y
Q701	8-729-201-27	s	2SC2715-Y
1) Q702	8-729-201-27	s	2SC2715-Y
2) Q702	8-729-100-66	s	2SC1623
1) Q703	8-729-201-27	s	2SC2715-Y
2) Q703	8-729-100-66	s	2SC1623

Ref.No.	Parts No.	SP	Description		
R1	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
R2	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R4	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R5	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R7	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
R8	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R11	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R14	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R15	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R16	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
2) R16	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
7) R17	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
8) R17	1-216-650-11	s	METAL CHIP 910	0.50%	1/10W
1) R18	1-216-655-11	s	METAL CHIP 1.5k	0.50%	1/10W
2) R18	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R19	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R20	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R21	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
1) R26	1-216-640-11	s	METAL CHIP 360	0.50%	1/10W
2) R26	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
1) R27	1-216-640-11	s	METAL CHIP 360	0.50%	1/10W
2) R27	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
R30	1-216-677-11	s	METAL CHIP 12k	0.50%	1/10W
R31	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R32	1-216-627-11	s	METAL CHIP 47	0.50%	1/10W

Ref.No.	Parts No.	SP	Description		
R33	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R34	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
2) R39	1-216-653-11	s	METAL CHIP 1.2k	5%	1/10W
1) R40	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R40	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R41	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R42	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R43	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R44	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
2) R44	1-216-636-11	s	METAL CHIP 240	0.50%	1/10W
R48	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R50	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
R51	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
R58	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
2) R62	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R72	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R73	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R75	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
R79	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
R81	1-216-641-11	s	METAL CHIP 390	0.50%	1/10W
R85	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
1) R93	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
2) R98	1-216-637-11	s	METAL CHIP 270	0.50%	1/10W
1) R101	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
2) R101	1-216-679-11	s	METAL CHIP 1.8k	0.50%	1/10W
2) R102	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
2) R103	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
R104	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
1) R105	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
2) R105	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
R106	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
1) R109	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
2) R111	1-216-673-11	s	METAL CHIP 8.2k	0.50%	1/10W
1) R114	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R114	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
R115	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
1) R116	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
2) R116	1-216-657-11	s	METAL CHIP 1.8k	0.50%	1/10W
R117	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R119	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R120	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
R121	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
R122	1-216-611-11	s	METAL CHIP 22	0.50%	1/10W
R124	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
R128	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R130	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
R131	1-216-638-11	s	METAL CHIP 300	0.50%	1/10W
R140	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
R141	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R143	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R153	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
R154	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
2) R200	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R201	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R202	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R203	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R204	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
2) R205	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
2) R502	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
1) R505	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W

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O-18AP, VR-42/62, SWITCHING REGULATOR

Ref.No.	Parts No.	SP	Description		
2) R505	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
1) R506	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
2) R506	1-216-627-11	s	METAL CHIP 100	0.50%	1/10W
2) R508	1-216-624-11	s	METAL CHIP 75	0.50%	1/10W
1) R511	1-216-647-11	s	METAL CHIP 680	0.50%	1/10W
2) R511	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
2) R512	1-216-645-11	s	METAL CHIP 560	0.50%	1/10W
R609	1-126-603-11	s	METAL CHIP 10	0.50%	1/10W
R612	1-216-032-00	s	CHIP 200	5%	1/10W
R626	1-216-603-11	s	METAL CHIP 10	0.50%	1/10W
R642	1-216-032-00	s	CHIP 200	5%	1/10W
R666	1-216-699-11	s	METAL CHIP 100k	0.50%	1/10W
R676	1-216-672-11	s	METAL CHIP 7.5k	0.50%	1/10W
R702	1-216-630-11	s	METAL CHIP 130	0.50%	1/10W
R703	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
R706	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
R710	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R711	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R712	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R713	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R714	1-216-675-11	s	METAL CHIP 10k	0.50%	1/10W
R715	1-216-667-11	s	METAL CHIP 4.7k	0.50%	1/10W
R718	1-216-664-11	s	METAL CHIP 3.6k	0.50%	1/10W
R719	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R720	1-216-664-11	s	METAL CHIP 3.6k	0.50%	1/10W
R727	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
R728	1-216-663-11	s	METAL CHIP 3.3k	0.50%	1/10W
R730	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
1) R733	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
2) R733	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
1) R734	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W
2) R734	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
1) R735	1-216-649-11	s	METAL CHIP 820	0.50%	1/10W
2) R735	1-216-671-11	s	METAL CHIP 6.8k	0.50%	1/10W
2) R736	1-216-631-11	s	METAL CHIP 150	0.50%	1/10W
1) R741	1-216-643-11	s	METAL CHIP 470	0.50%	1/10W
2) R741	1-216-658-11	s	METAL CHIP 2k	0.50%	1/10W
2) R742	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
R743	1-216-619-11	s	METAL CHIP 47	0.50%	1/10W
2) R744	1-216-651-11	s	METAL CHIP 1k	0.50%	1/10W
1) R746	1-216-603-11	s	METAL CHIP 10	0.50%	1/10W
2) R746	1-216-644-11	s	METAL CHIP 510	0.50%	1/10W
2) R749	1-216-639-11	s	METAL CHIP 330	0.50%	1/10W
2) R751	1-216-659-11	s	METAL CHIP 2.2k	0.50%	1/10W

Ref.No.	Parts No.	SP	Description	
RV1	1-237-515-21	s	VAR, CERMET	1k
RV2	1-237-503-21	s	VAR, CERMET	10k
RV4	1-237-518-21	s	VAR, CERMET	10k
RV5	1-237-514-21	s	VAR, CERMET	500
RV7	1-237-515-21	s	VAR, CERMET	1k
1) RV9	1-237-515-21	s	VAR, CERMET	1k
2) RV9	1-237-514-21	s	VAR, CERMET	500
RV10	1-237-515-21	s	VAR, CERMET	1k
RV11	1-237-515-21	s	VAR, CERMET	1k
RV13	1-237-515-21	s	VAR, CERMET	1k
1) RV14	1-237-503-21	s	VAR, CERMET	10k
2) RV14	1-237-501-21	s	VAR, CERMET	2k
RV15	1-237-517-21	s	VAR, CERMET	5k
RV16	1-237-512-21	s	VAR, CERMET	100
RV17	1-237-512-21	s	VAR, CERMET	100
RV19	1-237-512-21	s	VAR, CERMET	100
RV20	1-230-838-11	s	VAR, METAL FILM	200
RV21	1-230-838-11	s	VAR, METAL FILM	200
2) RV501	1-237-518-21	s	VAR, CERMET	10k
RV601	1-237-515-21	s	VAR, CERMET	1k
RV700	1-237-514-21	s	VAR, CERMET	500
1) RV701	1-237-515-21	s	VAR, CERMET	1k
2) RV701	1-237-516-21	s	VAR, CERMET	2k
1) RV702	1-237-515-21	s	VAR, CERMET	1k
2) RV702	1-237-514-21	s	VAR, CERMET	500
1) RV703	1-237-515-21	s	VAR, CERMET	1k
2) RV703	1-237-514-21	s	VAR, CERMET	500
2) RV704	1-237-516-21	s	VAR, CERMET	2k

Ref.No.	Parts No.	SP	Description
S1	1-570-857-11	s	SLIDE
S2	1-571-259-11	s	SLIDE
S3	1-571-259-11	s	SLIDE
1) S4	1-570-857-11	s	SLIDE
2) S4	1-571-259-11	s	SLIDE
1) S5	1-570-857-11	s	SLIDE
2) S5	1-571-259-11	s	SLIDE

VR-42 BOARD

	1-622-592-12	o	PRINTED CIRCUIT BOARD, VR-42
RV11	1-237-781-11	s	VAR, CARBON 10k
RV12	1-237-781-11	s	VAR, CARBON 10k

VR-62 BOARD

	1-622-589-13	o	PRINTED CIRCUIT BOARD, VR-62
RV541	1-230-501-11	s	VAR, CARBON 20k/20k

SWITCHING REGULATOR UR-21B

⚠	1-413-307-24	s	SWITCHING REGULATOR UR-21B
M201	1-541-524-11	s	DC FAN

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description			
UR-21B C1 BOARD						
C51	1-161-925-91	s	CERAMIC	100pF	10%	500V
C52	1-161-925-91	s	CERAMIC	100pF	10%	500V
C53	1-131-458-51	s	TANTAL	1.5	20%	16V
C55	1-130-018-51	s	FILM	0.001	5%	50V
C56	1-130-528-51	s	TEREPHTHALATE	0.1	10%	50V
C57	1-130-506-91	s	TEREPHTHALATE	0.0015	10%	50V
C59	1-130-528-51	s	TEREPHTHALATE	0.1	10%	50V
C61	1-124-924-91	s	ELECT	1	20%	100V
CN52	1-564-352-11	o	PIN 7P			
CN53	1-564-352-11	o	PIN 7P			
D51	1-807-913-21	s	11EQS04			
D52	1-807-913-21	s	11EQS04			
D53	1-807-913-21	s	11EQS04			
D54	1-807-913-21	s	11EQS04			
D55	8-719-911-19	s	1SS119			
D56	8-719-911-19	s	1SS119			
D57	8-719-109-94	s	RD6.2ES-B3			
D58	8-719-107-87	s	03P2M			
D59	8-719-911-19	s	1SS119			
D60	8-719-911-19	s	1SS119			
D61	8-719-911-19	s	1SS119			
D62	8-719-911-19	s	1SS119			
D63	8-719-109-75	s	RD4.3ES-B2			
IC51	8-759-937-59	s	MB3759 (FUJITSU)			
IC52	8-759-103-93	s	uPC393C (NEC)			
L51	1-410-466-21	s	MICRO 4.7			
Q51	8-729-208-04	s	2SK422			
Q52	8-729-208-04	s	2SK422			
Q53	8-729-117-54	s	2SA1175			
Q54	8-729-178-54	s	2SC2785*(28)			
Q55	8-729-117-54	s	2SA1175			
R56	1-247-903-00	s	CARBON 1M	5%	1/4W	
RV51	1-228-990-11	s	VAR, METAL GLAZE 1k			
UR-21B C2 BOARD						
C51	1-161-925-91	s	CERAMIC	100pF	10%	500V
C52	1-161-925-91	s	CERAMIC	100pF	10%	500V
C53	1-131-458-51	s	TANTAL	1.5	20%	16V
C56	1-130-528-51	s	TEREPHTHALATE	0.1	10%	50V
C57	1-130-506-91	s	TEREPHTHALATE	0.0015	10%	50V
C59	1-130-528-51	s	TEREPHTHALATE	0.1	10%	50V
CN52	1-564-352-11	o	PIN 7P			
CN53	1-564-352-11	o	PIN 7P			
D51	1-807-913-21	s	11EQS04			
D52	1-807-913-21	s	11EQS04			
D53	1-807-913-21	s	11EQS04			
D54	1-807-913-21	s	11EQS04			
D55	8-719-911-19	s	1SS119			
D56	8-719-911-19	s	1SS119			
D57	8-719-110-41	s	RD15ES-B2			
D58	8-719-107-87	s	03P2M			
D59	8-719-911-19	s	1SS119			
D60	8-719-911-19	s	1SS119			
D61	8-719-911-19	s	1SS119			
D62	8-719-911-19	s	1SS119			
D63	8-719-110-22	s	RD11ES-B2			
IC51	8-759-937-59	s	MB3759 (FUJITSU)			
IC52	8-759-103-93	s	uPC393C (NEC)			
L51	1-410-466-21	s	MICRO 4.7			
Q51	8-729-208-04	s	2SK422			
Q52	8-729-208-04	s	2SK422			
Q53	8-729-117-54	s	2SA1175			
Q54	8-729-178-54	s	2SC2785			
Q55	8-729-117-54	s	2SA1175			
R56	1-247-903-00	s	CARBON 1M	5%	1/4W	
RV51	1-228-990-11	s	VAR, METAL GLAZE 1k			
UR-21B M1 BOARD						
C101	1-136-564-11	s	CERAMIC	1000pF	10%	500V
C102	1-136-564-11	s	CERAMIC	1000pF	10%	500V
C104	1-125-477-11	s	ELECT	470	20%	400V
C105	1-125-477-11	s	ELECT	470	20%	400V
C106	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C107	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C203	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C204	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C205	1-124-636-51	s	ELECT	3300	20%	25V
C206	1-130-516-91	s	TEREPHTHALATE	0.01	10%	50V
C209	1-124-891-51	s	ELECT	10000	20%	6.3V
C211	1-130-772-00	s	FILM	0.22	10%	63V
C212	1-124-621-51	s	ELECT	3300	20%	6.3V
C213	1-130-772-00	s	FILM	0.22	10%	63V
C214	1-124-585-51	s	ELECT	3300	20%	10V

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SWITCHING REGULATOR

Ref.No.	Parts No.	SP	Description			
C221	1-130-518-91	s	TEREPHTHALATE	0.015	10%	50V
C222	1-130-524-51	s	TEREPHTHALATE	0.047	10%	50V
C223	1-130-524-51	s	TEREPHTHALATE	0.047	10%	50V
C227	1-124-120-51	s	ELECT	220	20%	25V
C228	1-130-772-00	s	FILM	0.22	10%	63V
C229	1-130-772-00	s	FILM	0.22	10%	63V
C230	1-130-772-00	s	FILM	0.22	10%	63V
⚠ CN101	1-564-242-11	o	5P			
CN201	1-564-932-11	o	9P			
CN202	1-560-893-00	o	5P			
CN203	1-560-299-11	o	2P			
CN204	1-560-890-00	o	2P			
D101	8-719-109-75	s	RD4.3ES-B2			
D102	8-719-912-20	s	1SS120			
D103	1-807-913-21	s	11EQS04			
D104	1-807-913-21	s	11EQS04			
D201	1-807-774-11	s	AU02A			
D202	8-719-109-85	s	RD5.1ES-B2			
D203	8-719-109-85	s	RD5.1ES-B2			
D204	8-719-911-19	s	1SS119			
D205	8-719-200-02	s	10E2			
D206	8-719-200-02	s	10E2			
D207	1-807-911-11	s	F10P40F			
D208	8-719-200-02	s	10E2			
D209	8-719-200-02	s	10E2			
D210	8-719-302-60	s	FML-32S			
D211	1-807-963-21	s	31DF2			
D212	1-807-963-21	s	31DF2			
D213	8-719-110-13	s	RD9.1ES-B2			
D214	1-807-911-21	s	F10P40FR			
D215	8-719-912-20	s	1SS120			
D216	8-719-912-20	s	1SS120			
D220	8-719-200-02	s	10E2			
D222	8-719-200-02	s	10E2			
FB201	1-543-060-11	s	FERRITE BEAD			
FB202	1-543-060-11	s	FERRITE BEAD			
FB203	1-543-060-11	s	FERRITE BEAD			
FB204	1-543-060-11	s	FERRITE BEAD			
FB205	1-543-060-11	s	FERRITE BEAD			
FB206	1-543-060-11	s	FERRITE BEAD			
IC101	1-807-814-11	s	B-5272 (JRM)			
IC201	8-759-135-80	s	uPC358C (NEC)			
IC202	8-759-077-33	s	TL431CLP (TI)			
IC203	8-759-077-33	s	TL431CLP (TI)			
L201	A-4935-038-A	s	CHOKE			
L202	1-421-459-21	s	CHOKE			
L203	A-4935-037-A	s	CHOKE			
L204	1-421-459-21	s	CHOKE			
L205	1-421-734-11	s	CHOKE			
L206	1-421-459-21	s	CHOKE			
L207	1-421-459-21	s	CHOKE			
⚠ PS101	1-532-605-11	s	IC LINK			
PS102	1-532-605-11	s	IC LINK			
PS201	1-532-605-11	s	IC LINK			
Q101	1-807-858-11	s	IREP451			
Q102	1-807-858-11	s	IREP451			
Q103	8-729-113-32	s	2SB733			
Q104	8-729-113-32	s	2SB733			
Q201	8-729-103-43	s	2SB734*(28)			
Q202	8-729-178-54	s	2SC2785*(28)			
Q203	8-729-178-54	s	2SC2785*(28)			
Q204	8-729-178-54	s	2SC2785*(28)			
Q205	1-807-914-11	s	2SA1443-L			
Q206	8-729-177-43	s	2SD774			
Q207	1-807-914-11	s	2SA1443-L			
Q208	8-729-117-54	s	2SA1175			
Q209	1-807-915-11	s	2SC3692-L			
Q210	8-729-178-54	s	2SC2785*(28)			
R102	1-247-713-11	s	CARBON	1k	5%	1/4W
⚠ R103	1-247-692-11	s	CARBON	22	5%	1/4W
R104	1-247-692-11	s	CARBON	22	5%	1/4W
R107	1-205-622-00	s	CEMENT	33	5%	5W
R203	1-247-698-11	s	CARBON	68	5%	1/4W
⚠ R210	1-205-623-00	s	CEMENT	47	5%	5W
R212	1-215-888-00	s	METAL OXIDE	220	5%	2W
R215	1-247-887-00	s	CARBON	220k	5%	1/4W
⚠ R220	1-215-866-11	s	METAL OXIDE	330	5%	1W
R221	1-247-696-11	s	CARBON	47	5%	1/4W
⚠ R225	1-215-865-11	s	METAL OXIDE	220	5%	1W
R229	1-214-669-71	s	METAL	3.3	1%	1/4W
⚠ R230	1-215-889-00	s	METAL OXIDE	330	5%	2W
R231	1-215-889-00	s	METAL OXIDE	330	5%	2W
RV201	1-230-667-11	s	VAR, CERMET 500			
ST201	1-571-055-91	s	THERMAL SENSOR			

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Ref.No.	Parts No.	SP	Description
⚠T101	1-448-393-11	s	CONVERTER
T102	A-4935-035-A	s	CONVERTER
T103	1-421-819-11	s	CURRENT
T104	1-437-188-11	s	DRIVE
T105	1-437-188-11	s	DRIVE
T106	1-447-938-11	s	CONVERTER

UR-21B M2 BOARD

⚠C151	1-136-185-12	s	FILM	0.22	20%	250V
C152	1-136-185-12	s	FILM	0.22	20%	250V
C154	1-136-185-12	s	FILM	0.22	20%	250V
C155	1-161-742-12	s	CERAMIC	2200pF	20%	400V
C156	1-161-742-12	s	CERAMIC	2200pF	20%	400V
⚠C157	1-161-742-00	s	CERAMIC	2200pF	20%	400V
C158	1-161-742-00	s	CERAMIC	2200pF	20%	400V
C159	1-161-742-00	s	CERAMIC	2200pF	20%	400V
C161	1-136-564-11	s	FILM	1.8	10%	250V
C162	1-136-564-11	s	FILM	1.8	10%	250V
C163	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C164	1-161-915-00	s	CERAMIC	1000pF	10%	500V
⚠C165	1-161-742-00	s	CERAMIC	2200pF	20%	400V
C166	1-161-742-00	s	CERAMIC	2200pF	20%	400V
C167	1-161-742-00	s	CERAMIC	2200pF	20%	400V
C251	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C252	1-161-915-00	s	CERAMIC	1000pF	10%	500V
C253	1-124-556-11	s	ELECT	2200	20%	16V
C254	1-124-360-00	s	ELECT	1000	20%	16V
C255	1-124-790-11	s	ELECT	0.47	20%	100V
C256	1-124-898-11	s	ELECT	4700	20%	16V
C257	1-124-898-11	s	ELECT	4700	20%	16V
C258	1-124-898-11	s	ELECT	4700	20%	16V
C260	1-124-563-11	s	ELECT	2200	20%	25V
C263	1-136-155-00	s	TEREPHTHALATE	0.015	10%	50V
C264	1-136-161-00	s	TEREPHTHALATE	0.047	10%	50V
C265	1-136-161-00	s	TEREPHTHALATE	0.047	10%	50V
C268	1-130-772-00	s	FILM	0.22	10%	63V
C269	1-130-772-00	s	FILM	0.22	10%	63V
C270	1-130-772-00	s	FILM	0.22	10%	63V

⚠CN151	1-564-215-11	o	PIN 4P
CN251	1-566-313-11	o	PIN 7P
CN252	1-560-893-00	o	PIN 5P
CN253	1-560-890-00	o	PIN 2P

⚠D151	1-807-907-11	s	KB088JLM
D153	1-807-913-21	s	11EQS04
D154	1-807-913-21	s	11EQS04
D251	1-807-909-11	s	F10P20F
D252	1-807-921-11	s	FMG-34S
D253	1-807-911-21	s	F10P40FR
D254	8-719-109-97	s	RD6.8ES-B2
D255	8-719-912-20	s	1SS120
D256	8-719-912-20	s	1SS120
D257	8-719-200-02	s	10E2
D258	8-719-911-19	s	1SS119
D260	8-719-912-20	s	1SS120

⚠F151	1-532-604-21	s	250V 3A
FB251	1-543-060-11	s	FERRITE BEAD
FB252	1-543-060-11	s	FERRITE BEAD
FB253	1-543-060-11	s	FERRITE BEAD
FB254	1-543-060-11	s	FERRITE BEAD
FB255	1-543-060-11	s	FERRITE BEAD
FB256	1-543-060-11	s	FERRITE BEAD
IC251	8-759-007-33	s	TL431CLP (TI)
⚠L151	1-421-590-11	s	LINE FILTER
L152	1-421-978-11	s	LINE FILTER
L251	A-4935-039-A	s	CHOKE ASS'Y
L252	1-421-459-00	s	CHOKE
L253	1-421-734-11	s	CHOKE
L254	1-408-322-00	s	CHOKE
L255	1-421-459-00	s	CHOKE
L512	1-421-978-11	s	LINE FILTER
Q151	1-807-858-11	s	IREP451
Q152	1-807-858-11	s	IREP451
Q153	8-729-113-32	s	2SB733
Q154	8-729-113-32	s	2SB733
Q251	8-729-178-54	s	2SC2785*(28)
Q252	1-807-915-11	s	2SC3692-L
Q253	8-729-178-54	s	2SC2785*(28)

R151	1-202-727-11	s	SOLID	4.7M	10%	1/2W
⚠R152	1-205-915-11	s	WIREWOUND	4.7	10%	7W
R153	1-205-915-11	s	WIREWOUND	4.7	10%	7W
R154	1-247-692-11	s	CARBON	22	5%	1/4W
R155	1-247-692-11	s	CARBON	22	5%	1/4W
⚠R158	1-205-652-00	s	CEMENT	68	5%	5W
R251	1-205-622-00	s	CEMENT	33	5%	5W
R254	1-215-865-11	s	METAL OXIDE	220	5%	1W
R258	1-214-669-71	s	METAL	3.3	1%	1/4W
⚠R259	1-215-889-00	s	METAL OXIDE	330	5%	2W

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WITCHING REGULATOR, FRAME

Ref.No.	Parts No.	SP	Description
⚠R260	1-215-889-00	s	METAL OXIDE 330 5% 2W
RV251	1-230-668-11	s	VAR, CERMET 1k
⚠RY151	1-515-662-11	s	POWER
ST251	1-571-055-71	s	THERMAL SENSOR
⚠T151	A-4935-036-A	s	CONVERTER
T152	1-421-819-11	s	CURRENT
T153	1-437-188-11	s	DRIVE
T154	1-437-188-11	s	DRIVE

Ref.No.	Parts No.	SP	Descreption
FRAME			
	A-6050-554-A	s	HEAD DRUM ASS'Y,DBH-10A-R
	A-6730-924-A	o	INDICATION TUBE ASS'Y
	A-6734-245-A	o	KEY CHASSIS ASS'Y
	A-6762-351-A	s	DRUM ASS'Y, UPPER, DBR-10-R
⚠	1-413-307-24	s	SWITCHING REGULATOR, UR-21B
	1-464-821-11	s	DC-DC CONVERTER (INDICATION TUBE)
	1-520-496-11	s	AUDIO LEVEL METER (INDICATION TUBE)
	1-559-261-11	o	FLAT CABLE (KEY CHASSIS)
	1-559-265-11	o	FLAT CABLE (CASSETTE UP COMPARTMENT)
⚠CB001	1-576-036-11	s	BREAKER, CIRCUIT 6.3A
⚠CN001	1-560-222-21	s	3P INLET
CN007	1-509-176-51	s	RECEPTACLE, XLR, MALE "TIME CODE OUT"
CN008	1-509-176-51	s	RECEPTACLE, XLR, MALE "CH-1 OUT"
CN009	1-509-176-51	s	RECEPTACLE, XLR, MALE "CH-2 OUT"
CN010	1-509-176-51	s	RECEPTACLE, XLR, MALE "CH-3 OUT"
CN011	1-509-176-51	s	RECEPTACLE, XLR, MALE "CH-4 OUT"
CN012	1-509-176-51	s	RECEPTACLE, XLR, MALE "SELECTED CH-1/CH-3 OUT"
CN013	1-509-176-51	s	RECEPTACLE, XLR, MALE "SELECTED CH-2/CH-4 OUT"
CN014	1-509-095-00	s	RECEPTACLE, 8P "MONITOR OUT"
CN015	1-561-781-21	s	RECEPTACLE, BNC "VIDEO-1 OUT"
CN016	1-561-781-21	s	RECEPTACLE, BNC "VIDEO-2 OUT"
CN017	1-561-781-21	s	RECEPTACLE, BNC "VIDEO-3 OUT"
CN019	1-562-160-00	s	RECEPTACLE, 12P, FEMALE "DUB/COMPONENT1 OUT"
CN021	1-561-781-21	s	RECEPTACLE, BNC "REF. VIDEO IN"
CN022	1-561-781-21	s	RECEPTACLE, BNC "REF. VIDEO IN (THROUGH OUT)"
CN029	1-561-781-21	s	RECEPTACLE, BNC "COMPONENT 2 Y OUT"
CN030	1-561-781-21	s	RECEPTACLE, BNC "COMPONENT 2 R-Y OUT"
CN031	1-561-781-21	s	RECEPTACLE, BNC "COMPONENT 2 B-Y OUT"
CN430	1-562-285-11	o	PLUG HOUSING (TO SW'ING REG)
CN431	1-562-833-11	o	PLUG HOUSING (TO SW'ING REG)
CN432	1-562-800-11	o	PLUG HOUSING (TO SW'ING REG)
H002	8-825-554-73	s	HEAD,CTL PS244-21 "CTL"
H004	8-825-771-11	s	HEAD PS244-2103C "AUDIO/TIME CODE"
L8	1-543-316-21	s	SENSOR "TAPE BEGINNING SENSOR"
L9	1-543-316-21	s	SENSOR "TAPE END SENSOR"

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

Ref.No.	Parts No.	SP	Description
M001	1-541-524-11	s	MOTOR, DC "FAN"
M002	8-835-179-01	s	MOTOR, DC MCB2B15 "THREADING"
M003	8-835-179-01	s	MOTOR "L/S POSITION"
M004	8-835-259-01	s	MOTOR, DC BHF-1918A "CAPSTAN"
M006	A-6737-175-A	s	MOTOR ASS'Y "S-REEL"
M007	A-6737-175-A	s	MOTOR ASS'Y "T-REEL"
M008	1-541-376-11	s	MOTOR, DC DNR-4700A "UP/DOWN"
ME002	1-520-494-21	s	"RF"
PL001	1-518-508-00	s	12V 60mA "CASSETTE LAMP"
PL002	1-518-508-00	s	12V 60mA "CASSETTE LAMP"
PL003	1-518-508-00	s	12V 60mA "CASSETTE LAMP"
PM001	1-454-372-11	s	SOLENOID "CLEANER"
PM002	1-454-338-00	s	SOLENOID "PINCH"
PM003	1-454-417-31	s	SOLENOID "S-BRAKE"
PM004	1-454-417-31	s	SOLENOID "T-BRAKE"
⚠S001	1-570-117-31	s	ROCKER "POWER"

19-4. PACKING MATERIAL AND ACCESSORIES (SUPPLIED)

Parts No.	SP	Descreption
A-6729-474-A	s	MOUNTED PCB, EX-116
A-6729-475-A	s	MOUNTED PCB, EX-134
A-6729-476-A	s	MOUNTED PCB, EX-151
1-555-873-13	s	CABLE, REMOTE CONTROL 9P
⚠ 1-556-760-11	s	CORD, POWER (3 CORE)(for EK)
1-551-812-00	s	CORD, POWER (3 CORE)(for UC)
2-237-802-01	s	CUSHION
3-701-616-00	s	BAG, POLY
3-701-623-00	s	BAG, POLY
3-701-630-00	s	BAG, POLY
3-701-632-00	s	BAG, POLY
3-701-649-00	s	BAG, POLY
3-721-869-03	o	CUSHION, UPPER
3-721-870-02	o	CUSHION, LOWER
3-721-888-01	o	SPACER
3-721-889-01	o	SLEEVE, A
3-721-890-01	o	SLEEVE, B
3-721-891-01	o	SPACER, A
3-721-892-01	o	SPACER, B
3-725-092-02	o	INDIVIDUAL CARTON

19-5. FIXTURE (OPTION)

Parts No.	SP	Descreption
J-6001-820-A	s	DRUM ECCENTRICITY GAUGE (3)
J-6001-830-A	s	DRUM ECCENTRICITY GAUGE (2)
J-6001-840-A	s	DRUM ECCENTRICITY GAUGE (1)
J-6031-820-A	s	MULTI CONNECTOR CABLE (DIBNC)
J-6080-011-A	s	REEL TABLE TENSION GAUGE
J-6086-570-A	s	FLATNESS PLATE
J-6087-000-A	s	DRUM ECCENTRICITY GAUGE (5)
J-6152-450-A	s	WIRE CLEARANCE GAUGE
J-6190-800 A	s	TENSION REGULATOR SLANTNESS CHECK GAUGE
J-6320-680-A	s	REEL TABLE HEIGHT GAUGE
J-6320-870-A	s	REEL MOTOR SHAFT SLANTNESS CHECK GAUGE
J-6320-880-A	s	CASSETTE REFERENCE PLATE
Y-2031-001-0	s	CLEANING FLUID
2-034-697-00	s	CLEANING PIECE
7-723-902-00	s	INSPECTION MIRROR
7-732-050-20	s	TENSION SCALE (50G FULL SCALE)
7-732-050-30	s	TENSION SCALE (100G FULL SCALE)
8-960-096-51	s	ALIGNMENT TAPE, CR2-1B PS
8-960-096-86	s	ALIGNMENT TAPE, CR8-1B PS
8-960-096-91	s	ALIGNMENT TAPE, CR5-1B PS
8-960-098-37	s	ALIGNMENT TAPE, CR5-1A PS
9-911-053-00	s	THICKNESS GAUGE
Standard products		HEAD DEMAGNETIZER (HE-4)

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